tail, with crescentic marks upon the nape, as in Varanus u i l o t i c u s, and light and dark variegations upon the front and chin, (Smiths. No. 5742½.)

Specimens (adults, No. 5738) in Mus. Smithsonian, from Monte Verde, Cuba, Mr. C. Wright discoverer; also Mus. Acad. Nat. Sciences. This interesting species resembles somewhat the form of A. (?) c a r o l i n e n s i s, from Cuba. In specimens of that species of very small size the facial rugæ are prominent, the frontal scales much more numerous, and those of the back and belly keeled. The breadth between the orbits greater in i s o l e p i s, and the auricular aperture smaller. In the oviduct of the female was found a single large egg. Observations upon numerous species of Anolis, incline me to adopt the suggestion of Dr. Günther, viz., that but one egg at a time is impregnated and excluded.

Xiphocercus V a l e n c i e n i i *Fitz.*, Syst. Rept. 1843. *Anolis Valenciennii* Dum. Bibr., Erp. Gen. iv. 131, 1837. *Placopsis ocellata* Gosse, Ann. Mag. N. H. 1850, p. 346. *Anolis leucocephalus* Hall., Proc. A. N. Sci. Phil. 1856, p. 228.

The genus first defined by Mr. Gosse, as above, though previously named by Fitzinger, is to be separated, in our opinion, not so much on account of the *size* of the plates of the front, but by reason of their curious homology with those of the plate headed Lacertidæ and Scincidæ, which is readily traced. In the tail, and nature of the dermal covering, it resembles Eupristis; in the form of the head it imitates Anolis i o d u r u s, and o p a l i n u s most closely. It is interesting to observe that both these species, and Eupristis E d w a r d s i i, *Cope*, inhabit with it the island of Jamaica.

Notes on the Ornithology of Labrador.

BY ELLIOTT COUES.

During the summer of 1860 I accompanied an expedition in charge of J. W. Dodge, Esq., which visited the coast of Labrador, in order to procure for the Smithsonian Institution specimens of the birds to be found there, together with their nests and eggs, and to study their habits during the breeding season. The late period of arrival upon the coast, which was not until the first week in July, prevented any very extensive operations in the department of Oology, while the nature of the localities visited, joined with some circumstances of a private character, rendered the formation of a large collection of birds impracticable. In the following pages, however, are embodied the results of my investigations; and though the list of the species noticed is, from my limited opportunities for observation, necessarily incomplete, it is hoped that it will not be found entirely wanting in points of interest with regard to the habits of the birds which pass the breeding season in Labrador.

A brief notice of the different localities which were visited may not be considered unnecessary. The first point reached was Sloop Harbor, a few miles south of Little Mecattina, where were collected most of the eggs procured during the voyage. Here the *Somateria mollissima* and the *Utamania torda* were the most abundant and characteristic birds, while the *Larus argentatus*, *Uria grylle*, and *Mergus serrator* were also very numerous, all breeding on the islands in the vicinity. On the 6th of July, the vessel left Sloop Harbor, and, passing the Murre Rocks, where the *Uria lomvia* was breeding in immense numbers, proceeded directly to Esquimaux Bay, where the greater part of the summer was spent. Here were collected most of the land birds procured, among them the new *Aegiothus fuscescens*. *Zonotrichia leucophrys*, and *Anthus ludovicianus* were very abundant; and *Pinicola Canadensis* and *Turdus Aliciæ* not rare. Grouse and Ptarmigan were also met with; and I was fortunately enabled to examine an extensive breeding place of the *Mormon arcticus* (?).

A few days were spent at Rigolet, a station of the Hudson Bay Company, in

charge of Henry Conolly, Esq., from whom were received some valuable meteorological statistics. On the 15th of August the vessel left Esquimaux Bay, and proceeded to Henley Harbor, at the northern entrance to the Straits of Belle-Isle. At that date the smaller waders generally had commenced their southern migration, and during two weeks spent there, which completed my stay on the coast, specimens of most of them were procured.

In the preparatiou of the following pages, I have not attempted to present the synonymy of the species, nor their diagnoses. To do so would be but to repeat what may be found in full in the General Report on Birds, by Baird, Cassin and Laurence, (vol. ix. P. R. R. Exp. and Surv.) Reference is therefore made to the pages of this work; and also to Audubon's Birds of America, the standard authority on the habits of the birds, where the further history of each species will be found fully elucidated. The names and authorities adopted are strictly those of the General Report, except in a few cases where some change appeared necessary, from the characters of the birds entitling them to full generic rank.

Falco (Hypotriorchis) columbarius Linn.—Pidgeou Hawk. "Sparrow Hawk."

Falco columbarius, Aud., Birds Amer. vol. i. page 88, pl. 21.
Falco (*Hypotriorchis*) *columbarius*, Cassin, Gen. Rep. page 9.

The Pidgeon-hawk I met with on but two occasions. On the 5th of August, while on a small rocky island in Groswater Bay, oue was seen circling iu the air at a moderate height, aud constantly uttering its loud harsh cries; but owing to its watchfulness, I could not secure it. Ou the 25th of the same month, at Henley Harbor, another individual was seen, foraging among the immeuse flocks of Curlews, (*Numenius borealis*), which then covered the hills in the vicinity. The Pidgeon-hawk is occasionally stuffed and offered for sale by the natives; aud from their accounts I should judge it to be not at all rare. It is known to them as the "Sparrow-hawk," by which uame, however, they also designate the *F. sparverius*.

On the return voyage, when more than a hundred miles from any land, a Pidgeou-hawk made its appearance, and after circling about for some time, to select the safest place on which to alight, at length settled on the outermost bowsprit rigging, apparently quite exhausted. Yet even in this worn-out condition so watchful was it, that on my levelling a glass at it, it instantly took flight aud disappeared.

Falco (Tinnunculus) sparverius Linn.—Sparrow Hawk.

Falco sparverius, Aud., Birds Amer. vol. i. p. 90, pl. 22.
Falco (*Tinnunculus*) *sparverius*, Cassin, Gen. Rep. p. 13.

But a single individual of this species, so abundant in most portions of the United States, was observed during my stay iu Labrador. On the 10th of September, however, while in the Gulf of St. Laurence, off the Isle of Cape Breton, several were seen during the day. They circled quite closely around the vessel, showing but little fear.

? Falco (Hierofalco) Islandicus Gmelin.—Gyr Falcon. "Speckled Hawk."

? *Falco Islandicus*, Aud., Birds Amer. i. 81, pl. 19.
? *Falco* (*Hierofalco*) *Islandicus*, Cassin, Gen. Rep. 13.

I had uot the good fortune to obtain, or eveu meet with, either species of Gyr Falcon. The huuters with whom I conversed on the subject, said that they were seldom seen in the summer, but that they become more abundant in the autumn and winter. They were represented as at all times very shy and difficult to procure, frequenting the highest and most inaccessible crags, and subsisting mainly on Grouse and Ptarmigan. I could not, of course, determine from these accounts whether *F. Islandicus* or *candicans* was referred

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to; but the habits of both are probably exceedingly similar, if not identical. They are known to the natives under the name of "Speckled-hawks."

ASTUR ATRICAPILLUS (Wils.) Bon.—Goshawk. "Partridge-hawk."

Astur palumbarius, Aud., Birds Amer. ii. 95, pl. 23.
Astur atricapillus, Cassin, Gen. Rep. 15.

I obtained a single specimen of this hawk, in immature plumage, from a small collection of skins offered for sale by the natives. They know it as the "Partridge-hawk," but further than this I learned nothing respecting it. It does not appear to be abundant.

ARCHIBUTEO SANCTI-JOHANNIS (Gm.) Gray.—Black-hawk.

Archibuteo Sancti-Johannis, Cassin, Gen. Rep. 33.

While at Puffin Island, on Groswater Bay, I twice saw a large hawk that I supposed to be this species. It was hovering at a great height over the island, and constantly uttered its loud, piercing screams. I was unable to secure this specimen, which was the only one I observed during my stay in Labrador.

AQUILA CANADENSIS (Linn.) Cassin.—Golden Eagle. "Grepe."

Aquila chrysætos, Aud., Birds Amer. i. 50, pl. 12.
Aquila Canadensis, Cassin, Gen. Rep. 41.

An intelligent hunter, whom I questioned concerning this Eagle, informed me that though he knew it well, it was very rare, and very seldom obtained. His description was so exact, that I had no difficulty in determining that the present species was referred to, and not the *Halliætus albicilla*, concerning which, though it may be found in Labrador, I could learn nothing. He applied to the *A. Canadensis* the name of "Grepe," or "Greep," the derivation of which word I was unable to ascertain.

BUBO VIRGINIANUS (Gm.) Bon.—Great Horned Owl.

Bubo Virginianus, Aud., Birds Amer. i. 143, pl. 39. Cassin, Gen. Rep. 49.

A single specimen of this bird which I saw at Rigolet, made me aware of its existence in Labrador. I learned nothing of its habits; which, however, in all probability, do not differ materially from those of the more southern bird.

PICOIDES ARCTICUS (Sw.) Gray.—Arctic Three-toed Woodpecker.

Picus arcticus, Aud., Birds Amer. iv. 266, pl. 268.
Picoides arcticus, Baird, Gen. Rep. 98.

I did not myself meet with any individuals of the Three-toed Woodpecker; but I saw a specimen in a collection of skins made by the natives. It is probably not rare in the interior.

CERYLE ALCYON (Linn.) Boie.—Belted Kingfisher.

Alcedo alcyon, Aud., Birds Amer. pl. 77
Ceryle alcyon, Baird, Gen. Rep. 158.

I ascertained the existence of this bird in Labrador, from a single skin in the possession of the natives. They considered it as a rare bird.

TURDUS (TURDUS) ALICIÆ Baird.—Grey-cheeked Thrush.

Turdus (*Turdus*) *Aliciæ*, Baird, Gen. Rep. 217.

I was not a little suprised to find this species breeding abundantly in Labrador, its habitat being given by its describer as "the Mississippi Region to

the Missouri."* On the 24th of July I came upon a family of these birds in a deep thickly wooded ravine. The young were apparently just commencing to fly. Both parents uttered constantly a rather melancholy "*pheūgh*," in a low whistling tone. The female evinced the greatest anxiety for the safety of her brood, and endeavored to lead me from their vicinity by fluttering from bush to bush; and it was only with some difficulty that I secured both parents. In the course of the same day I saw several of these Thrushes, only, however, among the thickest firs. They all uttered precisely the same note, and were very timid, darting into the most impenetrable thickets, so that it was with great difficulty they could be procured. They appear to be very abundant in Labrador; probably full as much so as the *T. Swainsoni* in most portions of eastern United States.

There are readily appreciable characters by which this species may be distinguished from the closely allied *T. Swainsoni*. The uniformly longer, straighter, and narrower bill is a striking feature. The upper parts are of a much darker shade of olive, as are also the sides under the wings, and the spots on the throat and breast. But the most prominent feature is the entire absence of any buff tinge on the throat and sides of the head and around the eye, so conspicuous in *T. Swainsoni*. The whole bird is also considerably larger.

TURDUS (PLANESTICUS) MIGRATORIUS Linn.—Robin.

Turdus migratorius, Aud., Birds Amer. iii. 121, pl. 142.
Turdus (*Planesticus*) *migratorius*, Baird, Gen. Rep. 218.

The Robin, so common and well known throughout the United States, is equally abundant in all well wooded districts in Labrador. Its habits are so familiar to every one, that a detailed account of them would be superfluous. I remarked, however, that they appeared to be shyer than might be expected in a country where they are so seldom molested.

SAXICOLA ŒNANTHE Bechst.—Stone Chat.

Saxicola œnanthe, Baird, Gen. Rep. 220.
? *Saxicola œnanthoides*, Vigors, Zool. Voyage Blossom, 1839, 19. Cass. Ill. i. 1854, 208; pl. xxxvi.

I had the good fortune to procure a specimen of this interesting bird, at Henley Harbor, on the 25th of August. The sailor who brought it to me stated that it was in company with two others, but could give no intelligible account of its voice or manners. It was in immature plumage, very different from that of the adult, and was excessively fat.

The North American *Saxicola* has by some authors been considered distinct from the common European *S. œnanthe*, under the name of *S. œnanthoides*, first applied by Vigors to a bird from the North-west Coast. The author remarks upon its very close affinity to the European bird, and apparently considers the locality as the strongest ground for supposing a specific distinction. The name was subsequently applied by Cassin, in the work above cited, to a bird from Nova Scotia, the larger size and rather different proportions of the tarsus being with this author the most important characters. In a critical comparison of specimens from Europe, Greenland and Labrador, I have been unable to detect any distinctive features beyond those of size, and very slight differences of proportion; which last, however, are not constant, or greater than exist between undoubted specimens of *S. œnanthe*. The difference in size is no greater than would be expected from the more northern locality of the bird

*I have since detected this species at Washington, D. C.; and well characterized specimens have also been obtained in the same locality by my friend, Mr. D. W. Prentiss. This would seem to indicate an eastern range at least equal to that of *T. Swainsoni*, with which it is found associated, in the region west of the Mississippi.

examined. In the table of comparative measurements given below, it will be seen that the specimens from Greenland and Labrador are very nearly of the same dimensions, and also larger than European skins, though the details of bill, tarsus, &c., do not differ materially. It is not impossible that Vigor's bird should be distinct from the *S. œnanthe*, especially as the measurements,* if accurate, would indicate a bird of rather small dimensions for so northern a a locality; but at present I cannot but regard the Labrador bird as identical with the European. The question can only be definitely settled by a series of specimens from different localities in both continents.

Comparative Measurements.

No.	Locality.	Age.	Length.	Extent.	Wing.	Tail.	Bill above.	Along Gape.	From Nostril.	Tarsus.	Mid. Toe & Claw.	Hind Toe & Claw.
	Europe,.....	ad.	5·90†		3·73	2·45	·50	·80	·38	1·07	·82	.57
18958	France,.....	yg.	5·50†		3·73	2·30	·52	·79	·40	1·07	·87	.59
20551	Greenland,	yg.	6·20†		4·05	2·55	·49	·78	·40	1·10	·85	·58
18075	Labrador,..	yg.	7·00	12·6	4·05	2·55	·50	·79	·40	1·08	·83	·58

† of Skin.

Regulus calundula (L.) Licht.—Ruby-crowned Kinglet.

Regulus calendula, Aud., Birds Amer. ii. 168, pl. 133. Baird, Gen. Rep. 226.

A single specimen, a bird of the year, was obtained at Rigolet, on the 6th of August, shot in a very densely wooded ravine. No other individuals were observed. It is, however, in all probability an abundant bird in Labrador.

Anthus Ludovicianus (Gm.) Licht.—Tit-lark.

Anthus Ludovicianus, Aud. Birds Amer. iii. 40; pl. 150. Baird, Gen. Rep. 232.

The Tit-lark I found abundant in every locality in Labrador which I visited, and I had ample opportunities of observing its habits during the breeding season. It is the most numerous of the land birds, with the exception, perhaps, of the white-crowned sparrow, *Zonotrichia leucophrys*. Some of the most rocky and barren islands along the coast are inhabited only by these birds, with perhaps a solitary pair of horned larks, *Eremophila cornuta*. It frequents only open, bare, and exposed situations, such as the coast of Labrador every where affords, and is never found in thickly wooded localities.

Two nests which I obtained, were precisely identical in situation, form and construction. Each was placed on the side of a steep precipitous chasm, in a cavity in the earth of about the size of a child's head, into which a little dried moss had been previously introduced to keep the nest from the damp earth. It was composed entirely of rather coarse dried grasses, very loosely put together, with no lining of any sort. The external diameter was about six inches; the exterior three inches, by two in depth. The eggs were in one instance five, in the other four; their average length, for they varied somewhat, was thirteen-sixteenths of an inch, by nine-and-a-half-sixteenths of an inch in greatest diameter; of a dark chocolate color, indistinctly marked with numerous small lines and streaks of black.

The parent does not leave the nest until nearly trodden upon; then she flutters off with loud cries of distress which soon bring the male, though without attempting to lead the intruder from the nest by feigning lameness, as is the habit of so many birds. The pair together hover over the head of the in-

* "Length, 5⅛; wing, 3⅞; bill, rictus, ¾; tail, 2¼; tarsus, 1."

truder, at times approaching within a few feet, and all the while expressing their distress and anxiety by the most plaintive cries, until he withdraws; they even then frequently follow him for some distance. On such occasions several pairs in the vicinity are often attracted to the spot, and join their cries with those of the afflicted parents. Besides these cries, and their usual chirp, these birds have a much lower softer "*tsip*;" and the males during the breeding season have a very sweet, pleasant song.

The flight of the Tit-lark is performed in an unsteady undulating manner, and is not ordinarily protracted to any great distance. On alighting they rapidly vibrate the tail several times, in the manner of all the *Motacillinæ*. They seldom or never alight on trees or bushes, but always on the ground, where they walk or run with great ease and rapidity. They are fond of resorting at low tide, to the "land-washes," (as the low muddy flats over which the tide flows are styled in Labrador,) where they run about on the mud and dried "Eel-grass," (*Zostera*), searching for food in company with the smaller Sand-pipers, and very much in the same manner. Though finding an abundance of food, none that I examined were at all fat. They at all times exhibit a heedless familiarity and entire want of fear of man, though the observer may be standing within a few paces. They feed unconcernedly around the doors of the houses; and I have frequently seen them searching for food on the very roofs of the sheds and houses; which, being thatched with brush, and a layer of turf, afford a convenient lurking place for their insect prey.

Dendroica pinus (Wils.) Baird.—Pine-creeping Warbler.

Sylvicola pinus, Aud. Birds Amer. ii. 37; pl. 82.
Dendroica pinus, Baird, Gen. Rep. 277.

This, and the succeeding species were the only *Dendroicas* met with in Labrador. The single specimen of the Pine-creeping obtained was shot in very dense fir woods, on the 1st of August, and was a young bird apparently just able to fly.

Dendroica striata Baird —Black Poll Warbler.

Sylvicola striata, Aud. Birds Amer. ii. 28; pl. 78.
Dendroica striata, Baird, Gen. Rep. 280.

This species I observed in every suitable locality, and was the only warbler I found abundant. It is very numerous in all well wooded situations, and is a most expert fly-catcher. On many occasions I saw it dart into the air in pursuit of flies, mosquitoes, and other insects, and return again to the same twig, in the manner of our common Wood Pewee, *Contopus virens*. This seems to be a more constant habit with this warbler, than with any other of its genus.

Parus Hudsonicus Forster.—Hudsonian Titmouse.

Parus Hudsonicus, Aud. Birds Amer. ii. 155; pl. 128. Baird, Gen. Rep. 395.

This species I met with on several occasions, always finding them associating in small restless companies. I experienced great difficulty in procuring specimens, owing to the dense nature of the firs they inhabit; for when in sight, they were always so near, that it was almost impossible to kill them without mutilation. Those procured were all young birds, exhibiting the markings of the adults very indistinctly. They were remarkably tame and familiar, hopping about unconcernedly within a few feet of my head, and hanging from the twigs in every conceivable attitude. I could discover little or no difference in their notes from those of the common Chickadee, *P. atricapillus*, to which they likewise exhibited a great similarity in their general manners, evincing the restlessness and activity so characteristic of the latter bird, and for which the whole family of *Paridæ* are so noted.

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EREMOPHILA CORNUTA Boie.—Horned Lark. "Skylark."

Alauda alpestris, Aud. Birds Amer. iii. 44; pl. 151.
Eremophila cornuta, Baird, Gen. Rep. 402.

Very abundant on all the barren moss-covered islands along the coast, and in every suitable situation on the main land. Labrador, indeed, from the fact that it is the most southern region which affords the peculiar open and exposed situations which these birds exclusively frequent, seems to be their special breeding ground. In their voice, flight, and general manners I noticed nothing different from their usual habits, well known during their extensive southern migration, except that they of course do not associate in flocks during the breeding season. To the natives they are known by their usual name of "Sky-larks."

PINICOLA CANADENSIS (Briss.) Cab.—Pine Grosbeak. "Mope," "Redbird."

Corythus enucleator, Aud. Birds Amer. iii. 179; pl. 199.
Pinicola canadensis, Baird, Gen. Rep. 410.

The Pine Grosbeak I ascertained to be not at all rare along the coast of Labrador, where I obtained several specimens; and it is probably still more abundant in the interior. It is confined entirely to the thick woods and patches of scrubby juniper. It is not at all shy, rather evincing a heedlessness of the presence of man, that must arise from the fact that it is so seldom molested; still from the dense nature of the firs it inhabits, it is rather difficult to procure. The female of a pair I obtained sat unconcernedly on a twig only a few paces distant, while I reloaded after shooting her mate; uttering continually a low soft "*shep*," almost exactly like that of the common Fox Sparrow, *Passerella iliaca*. Another note which I occasionally heard was a prolonged whirring chirrup, uttered in a rather low tone, which appeared to be the usual note of recognition between the male and female. This bird is commonly known to the natives by the singular appellation of "Mope;" the derivation of which word I could not ascertain. It is also sometimes called the "Red-bird;" and it has in addition an Esquimaux name, which, however, I do not venture to attempt.

AEGIOTHUS Cabanis.

Syn. *Acanthis*, Bonaparte, Consp. Av. 540. Nec Bechst. 1802; nec Keys. et Blas. 1840.
Aegiothus, Cabanis, Mus. Hein. 1851, 161. Typus *Fring. linaria* L. Baird, Gen. Rep. 1858.

Gen. Ch. Size small. Crown with a crimson patch; the breast and rump tinged with rosy in the male. Bill short, rather slender, conical, and acutely pointed, the lateral outlines concave; culmen, gonys and commissure about straight. Upper mandible with several obsolete ridges parallel with the culmen. Base of upper mandible covered with rigid, appressed, bristly plumuli, concealing the nostrils. Wings very long, reaching beyond the middle of the tail; first, second, and third primaries nearly equal, second usually a little the longest. Feet short, weak; tarsus about equal to middle toe and claw. Inner lateral toe rather longer than the outer; hind toe rather longer than the inner lateral, its claw longer than the digital portion. Tail moderately long, deeply forked; of twelve feathers.

A genus of fringilline birds of the sub-family *Coccothraustinæ* Baird, as defined by that author, coming between *Cannabina* Brehm, (Handbuch, 1828, Type *F. cannabina* Linn.), and *Leucosticte*, Swainson, (F. B. A. 1831, iii. 265, Type *Linaria tephrocotis*, Sw.,) though its affinities are clearly with the former genus. The general form, in the long wings, moderately long, forked tail, and very short, weak feet, and to some extent the pattern of coloration, in the conspicuous pileum, gular patch, rosy rump, &c., are very similar. But im-

portant differences are to be found in the slenderer, much more acutely pointed bill, with its decidedly concave lateral outlines, and the different character of the nasal plumuli. The toes are much shorter, the lateral unequal, and the tail feathers broader and more rounded.

Aegiothus of Cabanis (Mus. Hein. 1851, 161,) is based upon the *Fringilla linaria* of Linnæus; and supersedes *Acanthis* of Bonaparte (Consp. Av. 150,) which though used in connection with the present genus, is pre-occupied for another group.

AEGIOTHUS FUSCESCENS Coues, Nov. sp.—Dusky Red Poll.

A. Aegiotho linario paululum minor, rostro fusco magno, robusto plumulis brevibus sparsisque; superioribus partibus fuscis, vix lutẽo striatis; alis caudâque vix albido marginatis, lateribus distinctè nec confluentè fusco-striatis. Mas nupt. temp. uropygio rosaceo, pectore carmesino. Long. 5.25 *pollices; ala* 2.90 *poll.*

Sp. Ch. Bill large, very stout, the culmen and gonys slightly convex. Nasal plumuli very short and scant, barely covering the nostrils. Wings very long, pointed; first primary usually longest, second nearly, sometimes quite equal to it, third and fourth successively a little shorter. Tarsus about equal to middle toe and claw. Inner lateral toe but very little longer than the outer, its claw reaching scarcely beyond the basal third of the middle claw. Tail of moderate length, deeply forked. *Male, adult.*—Bill dusky except at base below. Frontlet, space between eye and bill, and gular patch, dull sooty brownish black. Entire upper parts deep dusky or chocolate brown, the edges of the feathers scarcely lighter. Rump whitish, tinged with rosy, thickly streaked with dusky. Wings, wing-coverts, and tail, deep dusky, very narrowly margined and tipped with dull whitish. Throat, breast and sides for some distance bright rosy, or carmine. Sides thickly marked with narrow, sharply defined streaks of chocolate brown. Rest of under parts white. *Female adult.*—Rather smaller than the male; rump but slightly tinged with rosy, and few or no traces of the carmine on the breast, which is dull white streaked with dusky. Other parts as in the male.

Length 5.25 inches, extent 9.00, wing 2.90, tail 2.30. Bill above .35. Tarsus .55; middle toe with claw .55; inner lateral .38.

Habitat.—Northern and Eastern North America. Fort Resolution, (Kennicott.) Labrador, (Coues.)

The essential features in which this species differs from the *A. linaria*, are those given in the diagnosis. The most striking peculiarity of *form*, as there stated, lies in the bill, which in size and proportions more resembles that of *Leucosticte* than *Aegiothus*. The nasal plumuli are much shorter and more sparse. The other proportions are as in *A. linaria*, but the size is somewhat less. The colors are very different; the upper parts of *A. fuscescens* being so dark and so obsoletely streaked as to seem almost uniform, which appearance is further heightened by the very narrow light edging to the wings and tail, which is reduced to a minimum. The sides are very thickly, but at the same time very distinctly, streaked with narrow sharply defined lines of deep chocolate brown. These streaks in *A. linaria* are less numerous, illy defined and more or less confluent. The carmine on the breast of full plumaged males appears to be deeper than is usual in *A. linaria*, while at the same time the rump is less rosy.

This interesting bird, though by no means so common as the Tit-lark or White-crowned Sparrow, is yet abundant along the coast of Labrador, where apparently it replaces the allied *Chrysomitris tristis*, its southern representative. It is a remarkably unsuspicious and familiar species, showing no signs of fear even when very closely approached. It frequents almost exclusively the scrubby juniper which grows every where in open places, in thick, almost impenetrable patches. I do not think that I ever observed it in more densely

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wooded districts. Its flight is performed in an irregular desultory manner, rising and falling in cycloidal curves, and is seldom protracted to any great distance. While passing over head it utters continually a peculiar rattling chirp impossible to describe, yet once heard never to be mistaken; and while seated on a twig, or engaged in searching for food, it has all the plaintive and varied modulations for which the *Chrysomitris tristis* is so noted, and from which the latter derives its specific name. I never heard any thing that could with any propriety be called a song. The food of this species consists entirely of the seeds of various grasses; and when shot while feeding, it will be found to have the throat crammed with them. In this respect, as well as in voice, flight and general manners, I could not but be struck with the similarity which exists between this bird and the common Goldfinch. Audubon, in his account of the *A. linaria*, is at some pains to refute the opinion that there exists between that bird and the *Chrysomitris*, the great similarity in general habits that has been ascribed to it. Receiving the testimony of that unrivalled student of nature, the close resemblance which I am able to state does exist between the present bird and the Goldfinch, would furnish, if necessary, additional proof of the specific distinction of *A. fuscescens* and *linaria;* since the habits and manners of two birds, however closely allied, will always be found to differ in some particulars.*

Passerculus savanna (Wils.), Bon.—Savannah Sparrow.

Emberiza savanna, Aud. Birds Amer. iii. 68; pl. 160.
Passerculus savanna, Baird, Gen. Rep. 442.

The partiality of this species for low moist meadows and watery savannahs, and the vicinity of the sea-shore, where it frequently associates with the *Ammodromus caudacutus*, is well known as its most characteristic habit. In Labrador, where it is abundant during the summer months, I never noticed it in any other situation. It was frequently to be seen even on the beds of dried "Eel-grass," (*Zostera,*) along the rocky shore, searching for food in company with the Tit-larks, and Bonaparte's Sandpipers, *Actodromas Bonapartei*. It is a shy and timid species, when approached darting at once into the thickest and rankest grass. It is then rather difficult to procure; for it rises only when almost trodden on, flies a few yards in a rapid zigzag manner, and then darting down again, runs rapidly to a considerable distance. It is a very active species, almost continually in motion, running nimbly through the tall grasses like a mouse. I heard no notes except the usual sparrow-like chirp, though in the spring it has considerable vocal powers as I have ascertained on other occasions.† The young differ greatly from the adult, the plumage being every where strongly tinged with ferrugineous, most conspicuous on the wing coverts and tertials; the under parts are thickly streaked with dusky. On the 1st of September, when I left the country, the species was still numerous, apparently as much so as ever.

While off the coast of Nova Scotia, the land appearing as an indistinct line on the horizon, a Savannah Sparrow alighted on the vessel in so exhausted a state, as to suffer itself to be taken in hand. After resting a short time, however, it took flight and disappeared in the direction of the land, which it no doubt reached in safety.

Zonotrichia leucophrys (Forst.) Sw.—White-crowned Sparrow. "Chip-bird."

Fringilla leucophrys, Aud. Birds Amer. iii. 157; pl. 192.
Zonotrichia leucophrys, Baird, Gen. Rep. 458.

This large and handsome Finch breeds in great numbers along the entire

* No individuals of *A. linaria* were seen during my stay in Labrador.
† At Washington, D. C., in the month of April.

coast of Labrador. Though I found it plentiful in every locality which I visited, and in all situations, it seems particularly fond of deep thickly wooded and secluded ravines, surrounded by high precipitous cliffs; and when in more open districts confines itself chiefly to the most tangled patches of juniper and scrubby fir. It is a very active and sprightly bird, almost continually in motion; it seldom alights without jerking and flirting the tail, and rapidly uttering its loud chirping. While the female is incubating, the male has a habit of mounting to the top of the cliff or tree nearest his nest, and there repeating his loud, somewhat monotonous, but not unpleasing notes for a half hour at a time. This song is very similar to that of the allied *Z. albicollis*, the common White-throated Sparrow, and consists of two long drawn syllables with a rising intonation, and then three more in a quick hurried manner, with a falling cadence; "*pēē, dēē, dĕ-dĕ-dĕ*;" the whole a mellow whistle. Should the performer be observed or approached while thus engaged, he instantly becomes silent, and dives hastily into the nearest cover.

The nest of the White-crowned Sparrow is always, I believe, placed on the ground; and, oftener than elsewhere in the midst of the little patches of a low heath that grows abundantly wherever the ground is dry enough. It is composed externally of moss, internally of fine dried grasses, evenly disposed in a circular manner. The eggs are four or five, oftener the former. Nuttall,* when he states that "the eggs, four or five in number, are said to be of a dusky or chocolate color," probably had reference to those of *Anothus ludovicianus*, which are much as he describes them. A nest of the White-crowned Sparrow, which I found on the 23d of July, contained four young, but a few days old. These, however, must have been rather late, as by the 1st of August there were many young birds to be seen. The female, when surprised on the nest, flutters off in silence, retiring but a short distance; but the male, if he be near, instantly flies to the top of the nearest tree or bush, and there vociferates his angry remonstrances, flirting his tail and jerking his body in the most energetic manner. This species, though not so familiar as the Tit-lark, is still frequently seen about the houses; and it is known to the natives simply as the "Sparrow," or oftener as the "Chip-bird."

JUNCO HYEMALIS (L.) Sclater.—Snow-Bird.

Niphœa hyemalis, Aud. Birds Amer. iii. 88; pl. 167.
Junco hyemalis, Baird, Gen. Rep. 468.

The Snow-bird, so common and so well known in winter throughout the eastern portions of the United States, is not so abundant as might be expected in Labrador, one of its breeding regions. From the fact that I was not in a suitable locality, I did not observe it until the latter part of July, at which time it was in small companies, the old and young associating together. They kept entirely in the thick woods, and were rather timid. I heard no song, nor indeed any note except the easily recognized chirp peculiar to this species.

Until within a few years the breeding places of the snow-bird were unknown, and its nidification involved in an obscurity remarkable for so common and familiar a bird. But it is now well ascertained to breed in the entire region around Hudson's Bay, and southward in the mountainous regions of New York and Pennsylvania.

SPIZELLA MONTICOLA (Gm.) Baird.—Tree Sparrow.

Emberiza canadensis, Aud. Birds Amer. iii. 83; pl. 166.
Spizella monticola, Baird, Gen. Rep. 472.

This little Sparrow is quite common in all wooded districts in Labrador. It is there a very tame and unsuspicious bird, showing no fear even when very

* Manual of Ornithology, 1st ed. i., page 479.

closely approached. I heard no note beyond the usual sparrow-like chirp. It probably leaves the country for the south by the 1st of October, as early in November it is abundant throughout the United States as far south, at least, as Washington, where it may be found in great numbers during the winter months.

SCOLECOPHAGUS FERRUGINEUS (Gm.) Sw.—Rusty Grakle.

Quiscalus ferrugineus, Aud. Birds Amer. iv. 65; pl. 222.
Scolecophagus ferrugineus, Baird, Gen. Rep. 551.

This, the only representative of the *Icteridæ* I observed in Labrador, appears to be rather uncommon. I noticed nothing peculiar in its habits, very probably, however, because my opportunities for observation were so limited. The only note I heard was the rough guttural "*chuck*," common to most of the species of the family. On the 24th of July, I came upon a family of these birds, in a densely wooded marshy spot. The young were at that time just fully fledged, and were fluttering around the vicinity of the nest. The species is confined to heavily wooded districts, showing evident partially for the low swampy or boggy localities, interspersed with pools, for which some parts of Labrador are so famous.

CORVUS CARNIVORUS Bartram.—Raven.

Corvus corax, Aud. Birds Amer. iv. 78; pl. 224.
Corvus carnivorus, Baird, Gen. Rep. 560.

This celebrated bird does not appear to be rare along the coast of Labrador. The high, precipitous and almost inaccessible cliffs, which, rising abruptly from the sea, give to this rock-bound coast such a barren aspect, afford safe and convenient retreats, where it constructs its nest, and rears its young in perfect safety. It is so excessively watchful and wary a bird, that although we saw them frequently, not a single individual was shot by any of our party. Indeed, I know of no bird more difficult to procure than the Raven; for in addition to its natural sagacity, which surpasses that of almost any bird, the peculiar nature of the rocks it inhabits render the surprising of it almost an impossibility. Its voice is similar to that of the common crow, but far louder and rougher. Ravens are most frequently seen in pairs; and they often descend to the sea shore, to feed on the dead fish, crabs, and other animal substances thrown up by the waves. The eggs, when they can be procured, are *eaten* by the natives; a species of vandalism well calculated to disturb the equanimity of any ardent collector or naturalist.

At Henley Harbor, an arm of Chateaux Bay, at the northern entrance to the straits of Belle-Isle, there is a remarkable geological formation, known as the "castle." This singular *butte* rises abruptly to a height of between 150 and 200 feet above the level of the sea. The sides are either perpendicular or even over-hanging, the strata perfectly vertical, regular and composed of pentagonal prisms, remarkably distinct. The top is perfectly smooth and level, and covered with a rich growth of moss, lichens, and the *Empetrum nigrum*. The ascent can be effected only at one point, where the soft crumbling rock has been worn away by the long continued trickling of water. The whole appears to be in a state of rapid decomposition; large masses of rock lie around the base in confusion, the strata, however, still distinctly visible. The débris thus accumulating at the base has raised a slope to within about fifty feet of the summit. A narrow but very deep channel, cut apparently by the action of the water, separates from it an island on which is another but less extensive formation of the same nature. This "castle" was the abode of a pair of Ravens, which, I was told, had resorted there regularly for several years. The nest was placed on a narrow ledge, inaccessible except from above by means of a rope. It was empty at the time I visited the place.

CORVUS AMERICANUS Aud.—Crow.

Corvus Americanus, Aud. Birds Amer. iv. 87; pl. 225. Baird, Gen. Rep. 566.

On the 14th of July, while under full sail, a crow flew directly past the vessel, near enough for me to identify it without the possibility of mistake. It was the only individual observed during my whole stay in the country.

PERISOREUS CANADENSIS (L.) Bon.—Canada Jay. "Whiskey Jack."

Garrulus brachyrhynchus, Swainson, F. B. A. 1831, ii. 296; pl. 53. juv.
Garrulus Canadensis, Aud. Birds Amer. iv. 121; pl. 234.
Perisoreus Canadensis, Baird, Gen. Rep. 590.

My first acquaintance with this remarkable Jay was on the 1st of August, in a very dense spruce forest. Contrary to my previous impressions regarding the species, on this occasion they were very shy, alighting only on the tops of the tallest trees, and flying off with loud harsh screams on my approach. Subsequently, however, at Rigolet, I found them abundant, and very familiar; one or more were always to be seen hopping unconcernedly in the garden patches around the houses, not in the least incommoded by the presence of man, and showing no signs of fear when very closely approached. The voice of this bird is a loud, harsh, discordant scream, very unlike that of the Blue Jay, *Cyanura cristata*. It possesses all the cunning and thievish propensities for which the whole family of garruline birds are so noted. It is particularly expert in stealing the bait from the fox and marten traps, on which account it is greatly detested by the hunters, who destroy it whenever opportunity occurs. Its most common appellation is simply "*Jay-bird*," though it is also known as the "*Whiskey-Jack*." According to Dr. Suckley, (P. R. R. Rep. xii. pt. ii., p. 216,) who is indebted to Mr. Kennicott for the information, this curious appellation is probably a corruption of the Chippeway name "*Wiss-ka-chon*," changed first into "*Whiskey-John*," and then further twisted to "*Whiskey-Jack*."

The young Canada Jay is wholly of a dull sooty black, with no white whatever about the head. In this state of plumage it has been described and figured by Swainson (F. B. A. 1831, ii. page 296, pl. 55) as a distinct species, under the name of *Garrulus brachyrhynchus*.

TETRAO CANADENSIS Linn.—Canada Grouse. "Spruce Partridge."

Tetrao Canadensis, Aud., Birds Amer. v. 83, pl. 294. Baird, Gen. Rep. 622.

Although the proper abode of the Canada Grouse is the dense and almost impenetrable forests of spruce and fir in the regions around Hudson's Bay, where it is an abundant bird, it is also found as far south as Maine and New York. There, however, it is chiefly confined to the more mountainous regions. In the west it is replaced by the closely allied *T. Franklinii* of Douglas, distinguished by the absence of the rufous band on the tail, and the conspicuously white margins of the tail coverts. The Canada grouse are mostly restricted to thickly wooded regions, where they find an abundance of their favorite food, consisting of seeds and berries of all kinds, and the buds of various shrubs. When skinned they emit a peculiar aromatic odor, arising from the highly flavored nature of their food; their flesh is dark colored and rather bitter. When disturbed they fly but a short distance, soon alighting on the trees, in which position they may be easily approached. The young, which seldom, I believe, number more than five or six, are led about by the parent for some time after they are able to fly. On the 24th of July I surprised several broods, still under the care of the parent. The mother, on discovering me, instantly uttered a "cluck," very similar to that of the common hen, and flew on to the nearest tree, while the young scattered in every direction, and concealed themselves in the thickest brush. A chick which I obtained at that date flew with perfect ease, though it could not have been more than

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two weeks old, and was as yet covered with scarcely anything but down. Its color was a dirty yellow; the few feathers buff, transversely barred with brown; and in size it was about equal to a chicken a week or ten days old.

The species is invariably known as the "Spruce Partridge."

LAGOPUS ALBUS (Gm.) Aud.—Ptarmigan. "Willow Partridge."

Lagopus albus, Aud., Birds Amer. v. 114, pl. 299. Baird, Gen. Rep. 633.

Great confusion prevails among the North American Ptarmigan, both with reference to the number of species to be enumerated, and their relationships to those of Europe. This is occasioned partly by the remote and inaccessible nature of the regions they inhabit, which cause comparatively few specimens to reach the hands of naturalists, and the difficulty of procuring them in summer plumage; since in winter they are almost entirely white, and present few distinctive marks beyond those of size and slight differences of proportions. By the latest authority on the subject, four species are assigned to North America: *L. albus* Aud., (the old *Tetrao albus* of Gmelin,) the largest, entirely white except the tail feathers, and with a very stout bill; *L. rupestris* Leach, which is smaller, with a slenderer bill and a black stripe through the eye; *L. Americanus* Aud., a species doubtfully admitted, coming nearest to the *albus;* and *L. leucurus*, a small western species, concerning which there has been no difficulty. Two of these species are found in Labrador: the *L. albus* and *rupestris*, known respectively as the "Willow" and "Rock Partridge." The distinction between them is always recognized; and they are so named from the fact that the former is confined chiefly to thickly wooded districts, while the latter inhabits more open and barren situations.

On the 23d of July I came upon a pair of the larger kind, amid tangled bushes in a low swampy situation. They were very tame and unsuspecting, walking unconcernedly along but a few feet from me, though their being in deep moult, and unable to fly, may have been the cause of this remarkable familiarity. I am credibly informed, however, that at certain seasons, while perched on trees, they can be captured by a noose at the end of a rod or pole. Great numbers of these birds are skinned and stuffed by the natives, while in winter plumage, and sold for about 25 cents apiece. While being skinned, they emit a highly aromatic odor, very similar to that given out by the Spruce Partridge. Their flesh is much used as an article of food.

LAGOPUS RUPESTRIS Leach.—Rock Ptarmigan. "Rock Partridge."

Lagopus rupestris, Aud., Birds Amer. v. 122, pl. 301. Baird, Gen. Rep. 635.

This species also occurs along the coast of Labrador, though, as might be expected from the densely wooded nature of the greater part of the country, much less abundantly than the preceding. I did not meet with it except in the collections of the natives.

BOTAURUS LENTIGINOSUS Steph.—Bittern.

Ardea lentiginosus, Aud., Birds Amer. vi. 94, pl. 365.
Botaurus lentiginosus, Baird, Gen. Rep. 674.

The Bittern is the only species of Heron which ventures so far north as Labrador, with the exception of the *Ardea herodias* and *Nyctiardea Gardeni*, which may possibly be found within its limits. The only indications I discovered of the presence of the Bittern was a wing in the possession of a hunter, who, however, did not consider it as a very rare bird.

CHARADRIUS VIRGINICUS Borck.—Golden Plover.

Charadrius marmoratus, Aud., Birds Amer. v. 203, pl. 316.
Charadrius Virginicus, Cassin, Gen. Rep. 690.

No Golden Plovers were observed until a short time before we left the country; then, about the date of the departure of the Curlews, *Numenius borealis*, they made their appearance in small numbers, in flocks of about a dozen or more. Some of them were in very perfect plumage.

Aegialitis semipalmatus (Bon.) Cab.—Ring Plover. "Ring-neck."

Charadrius semipalmatus, Aud., Birds Amer. v. 218, pl. 320.

Aegialitis semipalmatus, Cassin, Gen. Rep. 694.

The Ring Plovers are excessively abundant during the summer months along the whole coast of Labrador, which is one of their favorite breeding localities. On the first of September they had not yet left the country, being still as abundant as ever. When not separated into pairs for the purposes of reproduction, they frequent mostly sandy beaches and muddy flats, where they are found in loose straggling companies of from five or six to a dozen or more individuals, associated with the Semipalmated and Bonaparte's Sandpipers. They scatter widely apart while searching for food, running swiftly and gracefully over the sand, with the head lowered. They are at such times usually silent, except when disturbed, when they utter a loud mellow whistle on taking flight. Of all the smaller waders, none, with the exception of Bonaparte's Sandpiper, *Actodromas Bonapartei*, is so gentle and unsuspicious. They never seem to notice an approach of a few yards, and indeed I have sometimes found it difficult to force them to fly. They merely run swiftly a few steps, and then stand perfectly motionless, regarding the intruder in silence. The young run about as soon as hatched, and follow the parent, who leads them in search of food. They are at this time prettily mottled with black, light brownish and white, most of the under parts remaining of the latter color. Birds of the year may at all times be distinguished from the adults by the black of the bands being replaced by dull dirty ash.

No individuals of the *A. melodus* were observed in Labrador, nor did I find any indications of their presence there. From the fact of Audubon's finding them at the Magdalene Islands, it is to be supposed that they breed, sparingly at least, in the country.

Strepsilas interpres (L.) Ill.—Turnstone. "Chickling."

Strepsilas interpres, Aud., Birds Amer. v, 231, pl. 323. Cassin, Gen. Rep. 701.

The Turnstone I first observed at Henley Harbor, on the 20th of August, when the smaller waders generally had commenced their southern migration. How long they remain in the country I do not know, but on the 1st of September they were apparently as numerous as ever. Though not a very abundant species, I was enabled to procure a sufficient number of specimens, and to observe its curious habits. It afforded me much pleasure to notice with what dexterity they insert the bill beneath small stones and pebbles, and with a quick jerk turning them over, seize upon their prey lurking beneath. Though more shy and wary than the Sandpipers usually are, they did not seem to be as much so as the larger Tatlers. They are known to gunners by the name of "Chicklings."

Phalaropus fulicarius (L.) Bon.—Red Phalarope. "Bay-bird."

Phalaropus fulicarius, Aud., Birds Amer. v. 291, pl. 339. Cassin, Gen. Rep. 707.

Three specimens of this species were shot at sea, off Belle-Isle, from a flock of six. They were flying in a very compact body, much in the manner of the smaller Sandpipers, for which I at first mistook them. The sailors called them "Bay birds." While at sea we frequently saw this species, or the *P. hyperboreus*, resting gracefully on the water, particularly near masses of floating seaweed. Indeed, the Phalaropes, as a genus, are noted among all the smaller

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waders, both for their beauty and elegance of form, and their grace and activity of movement; whether running swiftly along the sandy shore, or swimming buoyantly on the water, or stepping lightly over the floating leaves of aquatic plants, their motions are equally pleasing. Their lobed feet make them perfectly at home on the water, and they are often seen at a considerable distance from land. The *fulicarius* and *hyperboreus* are both known by the uncouth and inappropriate, though curious name of "*Sea-geese.*"

GALLINAGO WILSONI (Temm.) Bon.—Wilson's Snipe.

Scolopax Wilsoni, Aud., Birds Amer. v. 339, pl. 350.
Gallinago Wilsoni, Cassin, Gen. Rep. 710.

From the accounts of the natives, I should judge that the Snipe is abundant in Labrador, as it is in most parts of the United States. I met with but a single individual.

MACRORHAMPHUS GRISEUS (Gm.) Leach.—Red-breasted Snipe.

Scolopax noveboracensis, Aud. Birds Amer. vi. 10, pl. 351.
Macrorhamphus griseus, Cassin, Gen. Rep. 712.

I procured a single individual of this species in immature plumage on the 23d of August, but I learned nothing further respecting it than that it is known by the name of "Brown-back."

TRINGA CANUTUS Linn.—Red-breasted Sandpiper.

Tringa islandica, Aud. Birds Amer. v. 254, pl. 328.
Tringa (*Tringa*) *canutus*, Cassin, Gen. Rep. 715.

This large Sandpiper I met with for the first time at Henley Harbor, on the 21st of August, when the *Tringas* and small Waders generally had commenced their southern migration. A few specimens were procured, in immature plumage, showing but slight traces of reddish on the under parts.

ACTODROMAS Kaup.

Actodromas, Kaup., Sk. Ent. Eur. Thierw. 1829. Typus *Tringa minuta* Leisl.

Gen. char. Bill about as long as, or very little longer than, the head, straight, slender, compressed, the tip very slightly expanded. Both mandibles deeply grooved to the expansion of the tip. Wings long; the first and second primaries about equal, the rest rapidly gradnated; secondaries short, obliquely incised at the ends; tertials long, slender, flowing. Tail rather long, doubly emarginate, the central feathers projecting. Tibia bare for two-thirds the length of the tarsus. Tarsus about equal to the bill, and equal to the middle toe. Toes entirely free at base, and but very slightly margined. Hind toe very short.

The characters of this genus are well marked and decided, and are very different from those of *Tringa*, with which it is usually associated. In the latter, the bill is very stout, much expanded at tip, and considerably longer than the head or tarsus; the tertials short, thick and comparatively stiff; the tarsus is much longer than the toes, which are very short, stout and widely margined; the tibial feathers reach nearly to the joint, and the tail is nearly even, with the central feathers not projecting. The pattern of coloration is very different. In all these particulars of form and proportion, *Tringa* has very little similarity to *Actodromas*, which is well worthy of full generic rank. As already indicated, the essential characters of the latter lie in the proportions of the bill, tarsus and toe, which are of equal length, and in the doubly emarginate tail. Other features are found in the elongated tertials, long, much exposed tibiæ, almost entire want of margins of the toes, &c. The known species are very similar in general pattern of coloration, all having the upper parts varied

with deep brownish, light ashy and reddish ; the breast and jugulum with an ashy or brownish suffusion, the rest of the under parts being white. All, except *A. Bonapartei*, and *A. Cooperi*, have a central blackish field on the rump. The genus comes nearest to *Pelidna* Cuvier, (Regn. Anim. 1817 ; type *T. cinclus*, L.) which, however, differs in the long decurved bill and some other peculiarities.

Actodromas maculata (Vieill.) Cassin.—Pectoral Sandpiper. "Grass-snipe."

Tringa pectoralis, Aud., Birds Amer. v. 259, pl. 329.
Tringa (Actodromas) maculata, Cassin, Gen. Rep. 720.

The "Grass-snipe," as this species is most appropriately called, differs essentially in its habits from any other Sandpiper with which I am acquainted, except the *A. minutilla*. Between these two species, however, there is a striking similarity, both as regards form, color and general habits. I first noticed the Pectoral Sandpiper at Ilenley Harbor, on the 20th of August, when it had commenced its southern migration. I there found it abundant, and had ample opportunities both of observing its habits and procuring specimens.

This species is seldom or never seen on open sandy beaches, as it prefers at all times the low muddy flats laid bare by the tide, the pools and ditches which intersect them, and the salt marshes by which they are bordered. They are not restricted to the neighborhood of the sea, but frequent low wet meadows and fields at a great distance from any large body of water. There they walk slowly and sedately through the grass in search of food, having little or none of the restless activity which characterizes most Sandpipers. While thus engaged the tail is generally elevated, somewhat on the manner of the *Zenaidura Carolinensis*, if comparison can be made between two birds so dissimilar. This habit of frequenting meadows has gained for them their common appellation of "Grass-snipe." When they rise from the grass to alight again at a short distance, they do so in silence, or with a single "tweet," and fly slowly evenly, and with the wings deeply incurved. When, however, they are frightened, by being repeatedly forced up, or when they are suddenly startled, they spring vigorously, emitting loud rapidly repeated notes, and fly in a quick zigzag manner, like the common snipe. They are then equally difficult to shoot. On several occasions I have noticed a habit which this bird possesses, which I do not recollect of ever having seen stated. When suddenly startled they rise with a loud note, and mounting very high in the air circle over the head of the intruder for several minutes, flying with very great rapidity and in perfect silence. When about to alight, which they often do at the very spot from which they rose, they nearly close the wings, and dart suddenly down in an almost perpendicular direction. This curious habit I have also observed at Portsmouth, N. H., and frequently at Washington, D. C.

This species is found in pairs or singly, and never, I believe, in flocks of any extent. They are very tame and unsuspicious, permitting a near approach without becoming alarmed. In the fall they are excessively fat and delicately flavored, and afford delicious eating. Very little is known of their breeding places, or of their peculiar habits during the season of reproduction.

Actodromas minutilla (Vieill.) Coues.—Least Sandpiper. "Peep."

Tringa minutilla, Vieillot, Nouv. Dict. 1819, xxxiv. 466. Gray, Genera, 1849, iii. 579.
Actodromas minutilla, Coues, Monog. *Tring.* N. A., in Pr. A. N. S. Ph. July, 1861, 191.
Tringa pusilla, Wilson, Am. Orn. 1813, v. 32, pl. xxxvii. fig. 4 ; id. Brew. Ed. 1840, 347, fig. 161 ; id. Ord. Ed. 1829, iii. 134 ; nec Linnæi. Swainson, F. B. A. 1831, ii. 386. Audubon, Orn. Biog. 1834, iv. 180 ; id. Birds Amer. 1842, v. 280, pl. 337 ; id. Syn. 1839, 237. Giraud, Birds L. I. 1844, 240. Gray, Genera, 1849, iii. 579.

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Pelidna pusilla, Bonaparte, Comp. List, 1838, 50. Gosse, Birds Jamaica, 1847, 348.
Tringa (*Tringa*) *pusilla*, Bonaparte, Comp. Specch. 1827, 62.
Tringa Wilsoni, Nuttall, Manual, 1834, ii. 121. Cooper and Suckley, Nat. Hist. Wash. Terr. 1860, 240. Cassin, Pr. A. N. S. 1860, xiii. 196.
Tringa (*Actodromas*) *Wilsoni*, Cassin, Gen. Rep. 1858, 721.

Until very recently, great confusion has prevailed among the smaller Sandpipers; and even now, though the species are pretty well ascertained, the proper name applied to each, and their synonomy, are points which are not yet definitely settled. With regard to no name, however, has there been so much difficulty as to that of *Tringa pusilla* Linn., the proper locating of which has ever been a disputed point. Most authors have referred it to the bird which Wilson, in 1813, (Am. Orn. ut suprà,) designated by that name, and which was subsequently, in 1834, dedicated to that naturalist by Nuttall, (Man. Orn. ut suprà.) Audubon, in all his works, Gray, in his genera, and Bonaparte, in his earlier works, adopted the name of *pusilla* for the present bird. As early as 1825, however, Bonaparte was aware that the *T. pusilla* of Linnæus was not the bird that Wilson gave under that name; for, in his observations on Wilson's Nomenclature, pages 88, 89, on the subject of *Tringa semipalmata*, Wils., he says, "Several species have been confounded together under the name of *T. pusilla; and although the present*" (*T. semipalmata*, Wils.) "*is the real species*," &c. In 1858, Cassin (Gen. Rep. page 725) proved pretty conclusively that the *T. pusilla* of Linnæus, based upon the *T. cinclus dominicensis minor* of Brisson, is really the *Ereunetes petrificatus* of Illiger, though he does not change Illiger's specific name. This, however, he has recently done in the Proceedings of the Philadelphia Academy, (xii. 195, 1860,) where he gives the bird as *E. pusillus*.

The name of *pusilla*, then, being exploded for the species now under consideration, the question arises what specific name is to be applied to it. Later authors have mostly taken that of *Wilsoni*, given to the species in 1834, by Nuttall, who describes its habits so accurately that there can be no doubt as to what bird he has reference. But the claims of "Le tringa maringouin," *Tringa minutilla* of Vieillot (Nouv. Dict ut suprà) to be the present species, appear to have been overlooked, or at least not generally conceded. Brewer, indeed, in his edition of Wilson, in 1840, quotes it, and Cassin, in the General Report in 1858, gives it as a synonym, but both with a query. But that *Tringa minutilla* really refers to the present species, there can be, I think, no reasonable doubt. Vieillot, page 466 of the Nouv. Dict., says of it, "Le nom que j'ai conservé à cet oiseau est celui sous lequel il est connu dans nos colonies de l'Amerique, et qui lui a été imposé d'après sa petite taille;" and after a description which applies well, he continues—"Il a des rapports avec le *tringa minuta* de Leisler," and adds, speaking of its habits, "Comme les *tringas becos* se comportent de même, il est résulté qu'on les a confondus ensemble." The description, especially with reference to size ("quatre pouces dix lignes") and to the length and proportions of the bill, ("noir, très grêle, et long de neuf lignes; les tarses de la même longuer,") will apply to no other species. Another evidence that this description has reference to the *Actodromas Wilsoni*, is the fact that the author recognizes *Tringa semipalmata*, Wils. "Le tringa demipalmé" as a totally distinct species. What the "tringa beco, *Tringa pusilla*, Lath.," of page 452 of the same work, refers to, is rather difficult to determine. Vieillot refers to the Am. Orn. plate 37, fig 4, which is *Tringa pusilla* of Wilson; but also quotes Brisson's "petite Alouette-de-mer de Saint-Dominque" which is *Ereunetes petrificatus* of the General Report. The description, however, applies best to the latter, which it may be well to consider it.

From the foregoing considerations, therefore, I cannot but adopt the specific name of *minutilla*, which has priority over *Wilsoni*, at least until weightier

reasons are adduced on the opposite side of the question. With regard to the generic characters there is not the slightest difficulty. The bird presents the closest affinity to the type of the genus *Actodromas*, (*T. minuta* Leisl.,) and is very different from either *Tringa* or *Pelidna*, in both of which it has been placed.

This diminutive species, in form, color and general habits, is very closely allied to the preceding, of which it is in fact a perfect miniature. As far as my own observation extends, the same remarks with regard to the manners, voice, flight, &c., apply equally well to this species. It even possesses the curious habit mentioned under the preceding bird. Though so much smaller, its note is fully as loud and piercing. The chief difference is, that in the fall the Least Sandpipers collect in flocks of considerable extent, and that they are found on sandy beaches oftener than are the Pectoral Sandpipers. Nevertheless, its favorite situations are low muddy flats, and the ditches that intersect marshy and sedgy fields, where it finds an abundance of its favorite food. In Labrador I think I never observed them in any other situations. They search for food with remarkable industry and perseverance, carefully examining with their delicate bills every inch of ground they pass over; while thus engaged they may be approached within a few feet without showing any signs of fear. Together with the *A. Bonapartei* and the *Ereunetes pusillus*, they are known by the common name of "Peeps." On the first of September they had not left the country, being still abundant.

ACTODROMAS (HETEROPYGIA) BONAPARTEI (Schl.) Cassin.—Bonaparte's Sandpiper. "Peep."

Pelidna cinclus, var. Say, Long's Exped. 1823, i. 172.
Tringa Schinzii, "Brehm." Bon. Syn. 1828. [Nec Brehm.] fide Gen. Rep. Aud. Birds Amer. 1842, v. 275, pl. 335, et al. Auct. Amer.
Tringa Bonapartei, Schlegel, Rev. Crit. Ois. Eur. 1844, 89.
Tringa (*Actodromas*) *Bonapartei*, Cassin, Gen. Rep. 722.
Actodromas (*Heteropygia*) *Bonapartei*, Coues, Monogr. Tring. N. A., in Pr. A. N. S. Ph. July, 1861, 199.

Audubon, in his account of this species, remarks: "Those procured in Labrador were shot in the beginning of August, and were all young birds, apparently about to take their departure." I met it for the first time on the 30th of July; but on the first of September, when I left the country, they were still as numerous as ever. They are found in great abundance on the rocky shores of Labrador, where covered with sea-weed and interspersed with muddy flats and shallow pools, in which last the birds wade quite up to the breast. I have also frequently seen them in a situation where I never found any other Sandpiper—on the large masses of rock sloping down abruptly to the water, green and slippery from the continued falling of the spray. They seem to be very fond of these locations, and I seldom passed one without seeing several of these "peeps" running nimbly about; and I have actually approached within three or four feet of them, as they stood motionless regarding me with curious eye. Of all the Sandpipers this is the most gentle and unsuspecting; they seem utterly regardless of the presence of man, and do not intermit their occupation of searching for food, though the observer may be standing within a few feet of them. When startled they emit a low soft "*weet*" very different from that of any other Sandpiper, and fly off in a very compact flock. If a part of them be killed, the gunner may commit equal havoc with his second barrel, as after a few circlings they fly past, or alight again on the same spot. They fly rapidly, in a rather unsteady manner, alternately showing the under and upper parts; and they may always be recognized in flight by the conspicuously white upper tail coverts. They usually associate with the

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Semipalmated Sandpipers and the Ring Plovers, and in common with other small species are known by the general name of "Peeps." Those that I shot were not so excessively fat as the *A. maculata* and *Ereunetes pusillus* commonly are at the same season.

Ereunetes pusillus (Briss.) Cassin.—Semipalmated Sandpiper. "Peep."

Tringa cinclus dominicensis minor, Brisson, Ornith. 1760, v. 222, pl. xxv. fig. 2, [haud dubiè.]

Tringa pusilla, Linnæus, Syst. Nat. 1766, i. 252, fide Gen. Rep.

? Tringa pusilla, Vieillot, Nouv. Dict. 1819, xxxiv. 452, [ad *T. cincl. dom. min.* Briss. refert.]

Ereunetes petrificatus, Illiger, Prod. 1811, 262. Cassin, Gen. Rep. 1858, 724.

Tringa semipalmata, Wilson, Am. Orn. 1813, vii. 131, pl. lxiii. fig. 4; id. Ord. Ed. 1829, iii. 132, pl. lxiii. fig. 4; id. Brewer, Ed. 1840, 542, fig. 225; ibid. Syn. 725. Vieillot, Nouv. Dict. 1819, xxxiv. 462; Dict. Class d'Hist. Nat. 1822, ii. 251. Swainson, F. B. A. 1831, ii. 381. Audubon, Orn. Biog. 1839, v. p. 110, pl. 408; id. Syn. 1839, 236; id. Birds Amer. 1842, v. 277, pl. 336. Giraud, Birds L. I. 1844, 239. Newberry, P. R. R. Surv. 1857, vi. 100.

Ereunetes semipalmatas, Cabanis, Schomburgk's Reise, iii. 758, fide Gen. Rep. Bonaparte, Compt. Rend. 1856, fide Gen. Rep. Cabanis, Journ. 1856, 419, fide Gen. Rep.

Tringa (Hemipalama) semipalmata, Bonaparte, Obs. Wils. 1825, num. 212; i l. Specch. Comp. 1827, 62.

Tringa (Heteropoda) semipalmata, Nuttall, Man. Orn. 1834, ii. 136.

Hemipalama semipalmata, Lambeye, Av. Cubae, 1850, 96.

Hemipalama minor, Lambeye, Av. Cubae, 1850, 97.

Heteropoda semipalmata, Bonaparte, Comp. List, 1838, 49. Dekay, N. Y. Fauna, 1844, 236, pl. 86, fig. 195. Gray, Genera, 1849, iii. 580.

? Heteropoda mauri, Bonaparte, Comp. List, 1838, 49.

Ereunetes mauri, Cabanis, Journ. 1856, 419, fide Gen. Rep.

Tringa brevirostris, Spix, Aves Bras. 1825, ii. 76, fide Gen. Rep.

? Pelidna Brissoni, Lesson, Man. d'Ornith. 1828, ii. 277, [T. pusillum, Linn. citat.]

Ereunetes pusillus, Cassin, Proc. Acad. Nat. Sc. 1860, xiii. 195. Coues, Monog. Tring. N. A., in Pr. A. N. S. Ph. July, 1861, 177.

The statements made under the head of *Actodromas minutilla*, tending to demonstrate that *Tringa pusilla* of Linnæus is not the bird given under that name by Wilson, also prove that the name really belongs to the species now under consideration. As there stated, *pusilla* was applied by Linnæus in 1766 to the bird figured and described by Brisson, (Ornith. 1760, v. p. 222, pl. xxv. fig. 2,) under the appellation of "La petite Alouette-de-mer de S. Dominque," *Tringa cinclus Dominicensis minor*. The description applies well, and the figure plainly shows the webbing of the toes, a feature which exclusively characterizes this species among the smaller Sandpipers. There being no reasonable doubt, therefore, of what *pusilla* really refers to, it must, according to the laws of nomenclature, take precedence over both *petrificatus* of Illiger, and *semipalmatus* of Wilson. Cassin restores the name in the Proceedings of the Academy of Natural Sciences, above cited, there calling the bird *Ereunetes pusillus*, though in the General Report he retains the specific name of *petrificatus* bestowed by Illiger in 1811.

The webbed feet of this bird were very early made the grounds for generic distinction from *Tringa*, to which they would fully entitle it, even were no other characters involved. But though several genera have been proposed for it, fortunately there is not the slightest difficulty as to the proper one to be employed. *Heteropoda* of Nuttall, (1834,) and *Hemipalama* of Bonaparte, (1825,) must both yield to *Ereunetes petrificatus*, which, according to the Gene-

ral Report, has been proved to be the *T. semipalmata* of Wilson, by actual examination of the type specimen. This being the case, *Ereunetes* must be used in the present connection, though for the reasons given above, *petrificatus* cannot be retained. The cause of Nuttall's proposing for the bird a new genus was probably the fact that Bonaparte in 1828 employed his *Hemipalama* in connection with a very different bird—the *Micropalama himantopus* of Baird—with which it has scarcely a generic character in common except the webbed toes. As a reference to the article will show, the name was proposed for, and first used in connection with, the *T. semipalmata* Wils.

I have thought it well to present the synonomy of this species, since, as will be seen, it has received a great variety of names. According to the General Report, the *Heteropoda Mauri* of Bonaparte, or the *Ereunetes Mauri* of Cabanis, is merely a large race of the present bird; while the remarkable variations in the length of the bill, to which the species is subject, have given rise to the *Hemipalama minor* of Gundlach, and the *Tringa brevirostris* of Spix. *Pelidna Brissoni* of Lesson is probably this species, since he refers to *Tringa pusilla* of Linnæus.

No individuals of this species were observed until the latter part of July, but soon after that date they became excessively abundant, and continued so during the month of August. When on muddy flats I generally found them associated with the Ring Plovers and Bonaparte's Sandpipers; but when on open sandy beaches they keep mostly to themselves, sometimes in flocks of great extent, the other species with which they principally mix not generally frequenting such situations. When in large flocks dozens may be killed at a shot; and as, after many wheelings, they often alight again on the same spot, they afford a second opportunity to the gunner. When wounded, they swim with considerable ease, aided by their semipalmated feet; but they are not capable of diving to any extent. These birds, possessing very few distinctive traits of habit among the smaller Sandpipers, are yet remarkable in one particular—the great facility with which they may be decoyed by imitating their call—a low mellow whistle. When skilfully executed, I have seen them approach within a few feet of the person seated on a rock in full view, though a moment after, on discovering their mistake, they would immediately take flight. They are also noted for the excessively fat condition in which they are always found in the fall, exceeding that of almost any other bird of their family. In this state they are delicious eating, being tender, juicy and delicately flavored, but on account of their diminutive size they are not much sought after. This species is the "Peep" *par excellence*, though the *Actodromas Bonapartei* and *minutilla* are also known by the same name.

GAMBETTA MELANOLEUCA (Gm.) Bon.—Tell-tale. "Yellow-legs."

Totanus vociferus, Aud., Birds Amer. v. 316, pl. 345.
Gambetta melanoleuca, Cassin, Gen. Rep. 731.

This large tatler, so well known and so universally disliked by all gunners on account of its watchful and noisy nature, is a very common bird along the coast of Labrador during the summer and early fall. During the fore part of the summer I found them very wary and difficult of approach. They would stand motionless and in silence, regarding me with watchful attention until I was nearly within shooting distance, when, at a single note from one of the flock, all would instantly take flight, emitting their loud and clear whistling, as if rejoicing at my discomfiture. By the middle of August, however, they seemed to have laid aside their watchfulness, and numbers were procured without difficulty. Though found in all situations near the water, their favorite localities seemed to be the muddy flats laid bare by the tide, the salt marshes adjoining them, and the pools which dot these marshes. They are seldom found in good condition for the table, being generally very lean. They are known altogether as "Yellow-legs."

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TRINGOIDES MACULARIUS (L.) Gray.—Spotted Sandpiper. "Teeter-tail."

Totanus macularius, Aud., Birds Amer. v. 303, pl. 342.
Tringoides macularius, Cassin, Gen. Rep. 735.

The Spotted Sandpiper forms almost the only exception to the general rules, that the species of this family retire to very high latitudes to rear their young, and on their return south in the fall associate in flocks of greater or less extent. It has a breeding range almost unparalleled among the Sandpipers, rearing its young from as far south, at least, as Washington, D. C., to the confines of the Arctic circle. Nor is it confined to the immediate vicinity of the sea; it abounds along the rivers and creeks of the interior, and shows a marked predilection for the vicinity of man's abode. The nest is usually placed in an orchard or meadow, often in a ploughed field, and is a mere depression in the ground, lined with a few dried grasses, or a little eel-grass, (*Zostera.*) The eggs, as usual in this family, are four in number, large for the size of the bird, pointed, and of a light cream color, every where blotched and spotted with dark brown and black. A nest found on the 4th of July, on one of the barren islands off the coast of Labrador, contained eggs in which the embryos had scarcely begun to be developed, while on the 17th of June, eggs found at Portsmouth, N. H., were on the point of hatching.

The Spotted Sandpiper is at all times a solitary species; it is rare to see more than two or three together. Its note is a low mellow "weet," often repeated. When wounded, even if very severely, it dives with great facility and quickness, and sometimes swims a considerable distance under water. Its most peculiar trait, however, is the habit it possesses of always, on alighting, and frequently at other times, balancing its tail in a remarkable manner, just as the Solitary Sandpiper, *Rhyacophilus solitarius*, does its head. This peculiarity has gained for it the common appellation of "Teeter-tail."

TRYNGITES RUFESCENS (Vieill.) Cab.—Buff-breasted Sandpiper.

Tringa rufescens, Aud., Birds Amer. v. 264, pl. 331.
Tryngites rufescens, Cassin, Gen. Rep. 739.

A single specimen of this rather uncommon Sandpiper was shot on the 20th of August by one of the sailors, but was unfortunately too much mutilated to be preserved. I learned nothing of its habits; it is probably a rare bird in Labrador.

NUMENIUS (NUMENIUS) LONGIROSTRIS Wils.—Long-billed Curlew. "Sickle-bill."

Numenius longirostris, Aud., Birds Amer. vi. 35, pl. 355. Cassin, Gen. Rep. 743.

Although I did not meet with this species myself, I was assured by all the hunters that it is occasionally seen among the vast flocks of the *N. borealis* that appear in the autumn. It is, however, rare in Labrador. It is known by the very suggestive name of "Sickle-bill."

NUMENIUS (PHAEOPUS) HUDSONICUS Lath.—Hudsonian Curlew. "Jack Curlew."

Numenius Hudsonicus, Aud., Birds Amer., v. 42, pl. 356. Cassin, Gen. Rep. 744.

Of the Hudsonian Curlew I saw but few individuals, and these were so shy that it was with difficulty that they were procured. They were most numerous at the time that the *N. borealis* were about taking their departure; and in their general manners, food, &c., appeared to be very similar to the latter. Their voice, however, is much louder and rougher. They are known to the natives as "Jack Curlews."

NUMENIUS (PHAEOPUS) BOREALIS (Forst.) Lath.—Esquimaux Curlew. "The C'lew."

Numenius borealis, Aud. Birds Amer., vi. 45, pl. 357. Cassin, Gen. Rep. 744.

From the time of my first arrival in the country until the second week in August, the stereotyped reply of the inhabitants to my inquiries concerning game was, "There is nothing to shoot yet, sir; the *C'lews* have not yet arrived; but when they come you will have fine sport." All were agreed as to the abundance of the birds, the facility with which they could be obtained, the sport of killing them, and their delicacy on the table. Naturally enough, when disappointed in procuring other birds, our thoughts turned to the Curlews, and we endeavored to console ourselves by shooting them in anticipation. It was not, however, until the 16th of August, when in the romantic harbor of "Indian Tickle," that we obtained the first glimpse of the Curlews. Five days later, at Henley Harbor, our sport commenced; the Curlews were there in immense numbers, and for nearly two weeks we all enjoyed such sport as almost made us forget our disappointments and hardships on the dreary Labrador coast. The Curlews then disappeared as suddenly as they had arrived; not, however, until I had had ample opportunities of studying their habits, and had procured a sufficient number of specimens.

The Esquimaux Curlew arrived on the Labrador coast from its more northern breeding grounds in immense numbers, flying very swiftly in flocks of great extent. These immediately broke up into smaller companies, and proceeded at once in search of food. They remained but a very short time. As Audubon most correctly says, "I was not long in discovering that their stay on this coast was occasioned solely by the density of the mists, and the heavy gales that already gave intimation of the approaching close of the summer; for whenever the weather cleared up a little, thousands of them set off and steered in a straight course across the broad Gulf of St. Lawrence. On the contrary, when the wind was high and the fogs thick, they flew swiftly and low over the rocky surface of the country, as if bewildered. Wherever there was a spot that seemed likely to afford a supply of food, there the Curlews abounded and were easily approached." His observations, however, differ much from mine, in reference to the time of the arrival and departure of the birds. He states that they made their first appearance on the 29th of July, and had all left by the 12th of August; whereas, I saw none until about that latter date, and none were to be seen on the first of September. For two or three days before their final departure, we had noticed them all moving directly southward, flying very high in the air in loose straggling flocks, with a broad extended front.

The Curlews associate in flocks of every size, from three to as many thousands, but they generally fly in so loose and straggling a manner, that it is rare to kill more than half a dozen at a shot. When they wheel, however, in any of their many beautiful evolutions, they close together in a more compact body, and offer a more favorable opportunity for the gunner. Their flight is firm, direct, very swift, when necessary much protracted, and is performed with rapid regular beats. They never sail except when about to alight; then the wings are much incurved downwards, in the manner of most Waders. As their feet touch the ground their long, pointed wings are raised over the back until the tips almost touch, and then deliberately folded, much in the manner of the Solitary Sandpiper, *Rhyacophilus solitarius*. Their note is an oft-repeated, soft, mellow, though clear whistle, which may be easily imitated. By this means they can readily be decoyed within shot, if the imitation is good and the gunner is careful to keep concealed. The smaller the flock, the more easily are they allured, and a single individual rarely fails to turn his course toward the spot from whence the sound proceeds. When in very extensive flocks they have a note which, when uttered by the whole number, I can compare to nothing but the chattering of a flock of blackbirds. When wounded and taken in hand, they emit a very loud harsh scream, like that

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of a common hen under similar circumstances, which cry they also utter when pursued.

Their food consists almost entirely of the Crow-berry, *Empetrum nigrum*,* which grows on all the hill-sides in astonishing profusion. It is also called the "Bear-berry" and "Curlew-berry." It is a small berry, of a deep purple color, almost black, growing upon a procumbent, running kind of heath, the foliage of which has a peculiar moss-like appearance. This is their principal and favorite food; and the whole intestine, the vent, legs, bill, throat, and even the plumage are more or less stained with the deep purple juice. They are also very fond of a species of small snail, that adheres to the rocks in immense quantities, to procure which they frequent the land-washes at low tide. Food being so abundant, and so easily obtained, they become excessively fat. In this condition they are most delicious eating, being tender, juicy, and finely flavored; but as might be expected, they prove a very difficult job for the taxidermist.

Although the Curlews were in such vast numbers, I did not find them so tame as might be expected, and as I had been led to suppose by previous representations. I was never able to walk openly within shooting distance of a flock, though I was told it was often done. The most successful method of obtaining them is to take such a position as they will probably fly over in passing from one feeding ground to another; they may then be shot with ease, as they rarely fly high at such times. The pertinacity with which they cling to certain feeding grounds, even when much molested, I saw strikingly illustrated on one occasion. The tide was rising and about to flood a muddy flat of perhaps an acre in extent, where their favorite snails were in great quantities. Although six or eight gunners were stationed on the spot, and kept up a continual round of firing upon the poor birds, they continued to fly distractedly about over our heads, notwithstanding the numbers that every moment fell. They seemed in terror lest they should lose their accustomed fare of snails that day. On another occasion, when the birds had been so harassed for several hours as to deprive them of all opportunity of feeding, great numbers of them retired to a very small island, or rather a large pile of rocks, a few hundred yards from the shore, covered with sea weed, and, of course, with snails. Flock after flock alighted on it, till it was completely covered with the birds, which there, in perfect safety, obtained their morning meal.

I was told that the Curlews were never seen in Labrador, except for the short period in the autumn. Such, however, I do not think to be the case, particulary as Audubon, upon good authority, asserts to the contrary. It is probable that the celerity and silence with which it passes northward during the spring migration, causes it to be partially overlooked. Its migrations are very extensive, but performed so quickly and silently that it is rarely seen south of the New England States. It is found in Texas; though as far as my knowledge extends, it does not breed much south of Hudson's Bay. In Labrador it is known by its proper name, which, however, is invariably shortened into "C'lew." Further south it is called the "Dough-bird;" but this name is also applied to other birds. In a great number of specimens I found considerable differences in size, in the color of the under parts, which varies from creamy white to deep buff, and in the purity and extent of the white patch on the throat. These differences, however, were not indicative of sex, nor even of age, so far as I could ascertain.

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* "EMPETRUM, Tourn. Flowers polygamous, scattered and solitary in the axils of the leaves, (inconspicuous) scaly bracted. Calyx of 3 spreading and somewhat petal-like sepals. Stamens, 8. Style very short; stigma 6-9 rayed. Fruit, a berry like drupe, with 6-9 seed-like nutlets, each containing an erect anatropous seed. *E. nigrum*, *L.* Procumbent and trailing; leaves linear oblong, scattered; fruit black."—(Gray's Manual of Botany, College Ed. p. 393.)

Bernicla Canadensis (L.) Boie.—Canada Goose.

Anser Canadensis, Aud., Birds Amer. vi. 178, pl. 376.
Bernicla Canadensis, Baird, Gen. Rep. 764.

No Wild Geese were observed until the second week in August, when for several days we saw them fly southward in small flocks, keeping at a great height in the air, and always preserving a wedge-shape form. No specimens were procured.

Anas Boschas Linn.—Mallard.

Anas Boschas, Aud., Birds Amer. vi. 236, pl. 385.
Baird, Gen. Rep. 774.

Audubon, in his account of this Duck, says "On the western coast of Labrador, none of the inhabitants we conversed with had ever seen the Mallard, and in Newfoundland the people were equally unacquainted with it, the species being in those countries replaced by the Black Duck, *Anas fusca*." Although it is a rare species in Labrador, I ascertained its existence there from a very fine pair offered for sale by one of the natives. In the interior of the continent it goes as far north at least as Great Slave Lake, where it breeds in considerable numbers.

Anas obscura Gm.—Dusky Duck. "Black Duck."

Anas obscura, Aud., Birds Amer. vi. 244, pl. 386.
Baird, Gen. Rep. 775.

The Dusky Duck is by far the most abundant of the *Anatinæ* along the coast of Labrador, where it breeds very plentifully. Though some times seen along the rocky and barren islands that skirt the coast, it at all times shows a decided preference for the ponds and streams of the interior. When the females are incubating, and engaged in rearing their young, the males desert them, and retire to secluded situations to renew their feathers. Some which I shot on the 23d of July were at that time in deep moult, and entirely unable to fly, though they made their way over the water with astonishing celerity. I saw young nearly half grown on the 1st of August; they were at that time still led about by the parent, and were unable to fly. It is a remarkably shy and watchful bird, so much so that it is only with great difficulty it can be procured. It is much esteemed as an article of food, and is known to the inhabitants as the "Black Duck."

Nettion Carolinensis (Gm.) Baird.—Green-winged Teal.

Anas Carolinensis, Aud., Birds Amer, vi. 281, pl. 392.
Nettion Carolinensis, Baird, Gen. Rep. 777.

Though the Green-winged Teal is a rare bird along the coast of Labrador, yet Audubon is incorrect in saying that it is never found there. A specimen which I saw in a collection of birds at Rigolet, proves its existence in that country. It is abundant in the interior, breeding in the region around Great Slave Lake.

Nettion crecca (L.) Kaup.—English Teal.

Nettion crecca, Baird, Gen. Rep. 778.

I was so fortunate as to procure a well characterized specimen of this Teal, which, though a common bird in Europe, is only known in North America as a rare straggler from that country. It is closely allied to the Green-winged Teal, but is nevertheless perfectly distinct, the differences being readily appreciable even without comparison. These consist in the entire absence of the white crescent before the wing; the more conspicuously colored elongated scapulars, which are deep black and pure creamy white; and the remarkable distinctness of the white lines on the head. I learned nothing of its habits.

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Camptolæmus Labradorius (Gm.) Gray.—Labrador Duck. "Fool-bird."

Fuligula Labradora, Aud., Birds Amer. vi. 329, pl. 400.
Camptolæmus Labradorius, Baird, Gen. Rep. 803.

I did not succeed in procuring or even meeting with this rare and very remarkable Duck. I was informed that, though it was very rarely seen in the summer, it is not an uncommon bird in Labrador during the fall; it is known by the peculiar appellation of "Fool-bird," a name given on account of its remarkably unsuspicious nature, which renders it easy to approach. The name, however, can scarcely be a general one. Further than this I learned nothing respecting it.

Pelionetta perspicillata (L.) Kaup.—Surf Duck. "Bottle-nosed Coot."

Fuligula perspicillata, Aud., Birds Amer. vi. 337, pl. 402.
Pelionetta perspicillata, Baird, Gen. Rep. 806.

The Surf Duck is an abundant bird along the coast of Labrador, where a good many breed, though perhaps a greater number go still further north. They are seen in flocks of considerable extent, especially during the renewal of their feathers, at which time they collect in great numbers along the shores of the bays and inlets. On the 3d of August, while sailing up Esquimaux Bay, the shore for nearly a mile was lined with these Ducks, and the succeeding species. They were all in deep moult, and most of them unable to fly, and yet were so wary and vigilant, that few were obtained, for they dived at the flash of the gun with such celerity as to escape the shot. They are tough birds, and remarkably tenacious of life, and require a heavy charge to kill them. Those procured were excessively fat, but their flesh was rank and oily. They are known as "Bottle-nosed Coots," a name given in allusion to the very peculiar shape and color of the bill.

Melanetta velvetina Baird.—Velvet Duck. "White-winged Coot;" "Brass-winged Diver."

Fuligulu fusca, Aud., Birds Amer. vi. 332, pl. 401.
Melanetta velvetina, Baird, Gen. Rep. 805.

This species is nearly if not quite as abundant as the preceding, with which it is often found associating. It appears to possess much the same habits. It is a very shy and vigilant species, and possesses powers of diving surpassed by few birds. It is known by the names of the "White-winged Coot" and "Brass-winged Diver," the former being the most usual appellation.

Though I did not meet with the American Scoter, *Oidemia Americana*, I was assured that it breeds in the neighborhood of Esquimaux Bay. It is known as the "Black Coot" and "Butter-billed Coot." The three species of *Oidemiæ* are all called "Coots;" a nomenclature that puzzled me not a little, until I ascertained to what birds the names referred.

Somateria mollissima (Linn.) Leach.—Eider Duck. "Sea-duck."

Fuligula mollissima, Aud., Birds Amer. vi. 349. pl. 405.
Somateria mollissima, Baird, Gen. Rep. 809.

The Eider Duck, so widely and justly celebrated for the valuable down which it furnishes in such quantity as to make it a profitable article of commerce, is the most abundant Duck throughout the extent of Labrador, which is with it a favorite breeding place. For although many breed in very high latitudes on both sides of the Atlantic, yet Labrador, from the peculiar nature of its coast, seems a country specially adapted to its wants. It also finds there a safer place of retreat while engaged in the duties of incubation, since, at least as far as I can ascertain, its down is not so regularly sought for as it is in some other countries. Wherever found at all it is an abundant species; but on the American coast it is seldom or never seen south of Long Island or the New Jersey Capes.

The Eiders choose for their breeding places the low, rocky, barren islands that stud the Labrador coast, generally giving the preference to those which are more or less covered with grass and low scrubby juniper. The nests are always placed on the ground; often a tuft of grass is selected, or the nest is hidden beneath the spreading boughs of juniper. The grassy crevices between flat strata, and the soft beds of moss at the foot of over-shadowing rocks are also favorite situations. The nest is of rather bulky construction, formed of moss, lichens, and dried grasses and seaweed, loosely matted together, and the whole fabric sunk as deeply as possible into the ground. The down is seldom, I think, added until the full complement of eggs is made up. These rarely exceed five or six in number, and occasionally are but four. They vary much in size and shape, and also considerably in color. They average about three inches in length by two in breadth, and the shape varies from an almost perfect ellipse to a regular ovoid or ovate. The ground color is a dull olive green, frequently with a bluish, and sometimes with a creamy tinge; and is often discolored with darker patches, like stains. The shell is smooth and polished. The eggs are excellent eating, as I know to my cost; for having on one occasion collected a large basketful, all those that were fresh and could be neatly blown, were appropriated by the sailors during a temporary absence.

While the female is incubating she permits a very near approach before she forsakes her nest; it is not uncommon to walk up to within a few feet of the sitting bird; she then flaps off in a hurried frightened manner, but always in silence, and makes directly for the nearest water. If a gun be fired on a small island, where many birds are sitting, all immediately leave their nests and collect in a body at some distance on the water. There they wash and plume themselves until the intruder withdraws, when they soon resume their duties.

There seems to be considerable difference in the time of laying the eggs. On the 4th of July, when I made most of my observations on these birds, I found nests in which the full complement had not yet been laid; eggs with chicks in all stages of developement; and broods of young were seen, led about on the water by the parent. As soon as the ducklings are hatched, they are led directly to the water, where they swim with perfect ease and dive with facility. The mother keeps them close about her, anxiously watching for every appearance of danger that might befal them, and ready at any moment to give battle to any hungry gull that might attack them. Under these circumstances only did we ever succeed in openly rowing within shot of an Eider, when anxiety for the safety of her brood made her forget her own danger. On such occasions, the mother, keeping them close together, would urge them forward until the danger became too imminent, when at a single note, the young would scatter and dive with astonishing celerity, and the mother dive or fly off as necessity required. The ducklings at this time are covered with long hair-like down, very fine, of a dusky brown above and light silvery grey below.

As soon as the females begin to deposit their eggs, they are deserted by the males, and from this time the whole care of incubation and rearing the young devolves upon the former. The males, at this season, assemble in large flocks, and retire to the outer and most secluded islands during the time of the renewal of their feathers. They are excessively shy and difficult to approach. The females, even those which are sterile, never, I believe, associate with the males, but keep in flocks by themselves.

There is a great difference in the colors of the plumage of the females at different ages, varying from very light ochreous to a uniform dark chestnut brown, much as represented in Audubon's plate. They are universally known as "Sea-ducks," the males being always distinguished as "Sea-drakes." I seldom or never heard the name of Eider applied to either sex by the natives.

[Aug.

I saw no individuals of the King Eider, *Somateria spectabilis*, during my stay; but was informed that in the fall they are not unfrequently met with.

MERGUS SERRATOR Linn.—Red-breasted Mergauser. "Shell-drake."

Mergus serrator, Aud., Birds Amer. vi. 395; pl. 412. Baird, Gen. Rep. 814.

The Red-breasted Mergauser breeds very abundantly along the Labrador coast, while the Buff-breasted, *M. Americanus*, is seldom or never seen. The females place their nests on much the same islands as the Eiders choose, but conceal them more carefully in the tall grass, or among thick scrubby juniper. The nest is rather neatly and compactly formed of mosses, lichens, and dried sea weeds, and warmly lined with down plucked from the breast of the mother, with which the eggs are nearly covered. The full number of these is nine or ten; incubation does not take place until late in the season, as I have found them nearly fresh on the 4th of July. They are regularly oval or ellipsoidal in form, and of a uniform light buff color. When the bird is surprised on the nest, she steals off as quietly as possible, and retires to a considerable distance. While the females are engaged in incubation, and in rearing their young, the males collect in small flocks and keep entirely by themselves, and are excessively shy and vigilant. I found young birds, apparently about a week old, on the 1st of August. Although so young, they were perfectly at home on the water, swimming with ease and grace, and diving with such celerity that it was with difficulty that three or four were procured.

GRACULUS DILOPHUS (Sw.) Gray. Double-crested Cormorant. "Shag."

Phalacrocorax dilophus, Aud., Birds Amer. vi. 423: pl. 416.
Graculus dilophus, Lawrence, Gen. Rep. 877.

As I had no opportunity of visiting any of the colonies of Cormorants, either in Labrador or Newfoundland, I can say nothing concerning their habits. I was informed that there was a "Shag settlement" (either of this species or the *G. carbo*,) near Sloop Harbor, a short distance south of Little Mecattina. A fine specimen of this species was presented to me by Capt. Dodge. Both this and the *G. carbo* are universally known as "Shags."

SULA BASSANA (L.) Briss.—Gannet.

Sula bassana, Aud., Birds Amer. vii. 44; pl. 425. Lawrence, Gen. Rep. 871.

On the first of July our proximity to the celebrated Gannet Rocks was clearly indicated by the numbers of these birds seen flying in every direction, engaged in seeking for food, which consists principally or wholly of fish. When satiated with food they are unable to fly for some time. We passed by one in this condition; it flapped heavily along on the surface of the water, trying in vain to rise, yet managing, with aid of wings and feet to proceed with considerable speed. Again, on the 11th of September, on our return we saw many Gannets; but though on both these occasions we passed within fifty miles or less of the rocks, I was denied the pleasure of observing the birds at their great breeding place, and can only speak of their flight and mode of fishing. They fly with firm, powerful beats, alternately sailing and flapping for about equal distances, and their flight is strong and capable of being greatly protracted. When searching for food, they fly slowly along at the height of a few yards above the surface, reconnoitering the water beneath. When a fish is espied, the bird poises an instant in the air and then darts suddenly down, the weight of its ponderous body giving it an impetus which sends it far under water, and raises the spray in a cloud around it. Taking advantage of this habit, Gannets are sometimes captured by fastening a fish to a soft plank, and sinking it just below the surface. The velocity with which the bird descends forces its bill through the wood, and it is thus made a prisoner.

Procellaira (Fulmarus) glacialis Linn.—Fulmar Petrel.

Procellaria glacialis, Aud., Birds Amer. vii. 204; pl. 455. Lawrence, Gen. Rep. 825.

On the 19th of August, while at sea off Belle-Isle, many Fulmars were seen, mostly resting on the water in companies of about a dozen. They generally remained quiet until we approached within sixty or seventy yards, when they would all take flight. In rising from the water the wings are lifted high over the back, the feet drawn under the belly, and with one vigorous spring and a flap at the same instant, the bird launches itself into the air. Its flight is extremely firm, vigorous and protracted, performed with slow measured beats. One individual was overtaken by our vessel, so loaded with food as to be unable to fly; it passed close by the side swimming as fast as possible, near enough to enable me to clearly discern the peculiar character of the nostrils which distinguishes this family of birds.

Thalassidroma (Oceanites) Wilsoni Bon.—Wilson's Stormy Petrel. "Mother Carey's Chickens."

Thalassidroma Wilsoni, Aud., Birds Amer. vii. 223; pl. 460. Lawrence, Gen. Rep. 831.

Many of these little oceanic wanderers, and probably also the *Thal. Leachii*, and *pelagica*, were seen every day during our voyage, until we entered the Gulf of St. Lawrence. After that few were observed, and none at all seen off the coast of Labrador. They probably breed along the coast of Nova Scotia. They are very familiar unsuspicious little birds, fluttering hither and thither close around a vessel to pick up the bits of floating garbage which forms their favorite food, and never showing the slightest fear. When about to pick up any floating substance, they raise the wings high over the back, flapping them lightly, and stretch the feet downwards to their fullest extent; the moment they touch the water, the morsel is secured, and the bird is off again in an instant. This attitude is represented to the life in Audubon's beautiful plate of the Least Petrel. Their flight is light, graceful and buoyant in the extreme, and their power of remaining long at a time on the wing is unsurpassed. Three or four are generally seen at a time, though when pressed by hunger they sometimes collect in great numbers about a vessel, eagerly searching for food. On one occasion, about dusk in the evening, we came upon a company of about thirty of them, collected together in a compact flock, sporting high in the air with most graceful movements, like so many swallows over a pond. What had attracted them I could not ascertain. These birds may be caught by means of a hook baited with a morsel of pork; but such is the antipathy of sailors to destroying them, that they are seldom molested. I am informed by my friend, Dr. H. Bryant, of Boston, that he has caught them by allowing a long filament of silk to float in the air behind a sailing vessel, with which the wings of the birds become entangled as they flutter against it. All three species of Petrels are universally known as "Mother Carey's Chickens."

Puffinus (Ardenna) major (Faber) Bon.—Greater Shearwater. "Hagden."

Puffinus cinereus, Aud., Birds Amer. vii. 212, pl. 456.
Puffinus (*Ardema*) *major*, Lawrence, Gen. Rep. 833.

Many Shearwaters were seen at different times during the voyage, generally singly, and always at a distance from land. They appeared to be shy and unfamiliar birds, none approaching near enough to enable me positively to determine the species, whether *P. major* or *anglorum*, though from their size I should suppose the former. On the 19th of August many were seen resting on the water in companies, in the manner of the Fulmars, *Procellaria glacialis*, to which they are nearly allied, both in form and general manners. Both species are known to sailors and fishermen as "Hagdens."

[Aug.

PUFFINUS (NECTRIS) FULIGINOSUS Strickl.—Sooty Shearwater. "Black Hagden."

Puffinis (Nectris) fuliginosus, Lawrence, Gen. Rep. 834.

On the 19th of August a few individuals of this easily recognizable species were seen in company with the *P. major*, to which in their habits they are probably very similar. They are known to the sailors as "Black Hagdens."

STERCORARIUS POMARINUS Temm.—Pomarine Jager. "Boatswain."

Lestris pomarinus, Aud., Birds Amer. vii. 186, pl. 451.
Stercorarius pomarinus, Lawrence, Gen. Rep. 838.

But very few individuals of this species were observed. I shot one which was hovering over the stern of the vessel, attracted by some floating garbage. I was surprised to see that it picked up floating substances more in the manner of a Petrel than of a Gull—descending slowly with the feet stretched downwards, and wings elevated, and scarcely touching the water. This Jager is known to sailors and fishermen as the "Boatswain," a name which is also applied to the *S. parasiticus*.

STERCORARIUS PARASITICUS Temm.—Arctic Jager. "Boatswain."

Lestris Richardsonii, Aud., Birds Amer. vii. 190, pl. 452.
Stercorarius parasiticus, Lawrence, Gen. Rep. 839.

I saw but a single individual of this species that I could identify with any certainty. It may be recognized in flight by the peculiar shape of its tail, intermediate between that of *S. pomarinus* and *cepphus* in the length of the middle tail feathers, which project some three inches beyond the others. The name of "Boatswain" is applied to this species as well as to the preceding. All the Jagers have received from the fishermen two very appropriate epithets, in allusion to the peculiar nature of their food, which, as is well known, consists principally of the partially digested fish which they force the Gulls to disgorge.

STERCORARIUS CEPPHUS (Brünn.)—Buffon's Skua. "Marlingspike."

Lestris parasitica, Aud., Birds Amer. vii. 192, pl. 453.
Stercorarius cepphus, Lawrence, Gen. Rep. 840.

Of this most beautiful and graceful of the Jagers I saw but very few individuals, and those only while at sea. It is easily recognized by the long slender feathers, which project six or eight inches beyond the others. From this peculiarity it has received the name of "Marlingspike" from the sailors. Its flight is extremely powerful, firm, even, and performed with regular beats, which propel it with great velocity. It never, I believe, sails. I had not the pleasure of witnessing its attacks upon the Gulls, in which it is said to display courage and intrepidity beyond all other species of the genus.

LARUS GLAUCUS Brünn.—Glaucous Gull. "Ice-gull."

Larus glaucus, Aud., Birds Amer. vii. 170, pl. 449. Lawrence, Gen. Rep. 842.

I saw but very few "Burgomasters" that I could positively identify, on the coast of Labrador, where they appear to be rather rare. They are probably more abundant in higher latitudes. I was informed by an intelligent hunter, who seemed to be acquainted with all the large birds, that there was a "colony" of the "Ice-gulls," as they are called, on some small islands known as the Herrings, about twenty-five miles off the coast, just opposite the entrance of Esquimaux Bay. Unfortunately, however, I had no opportunity of verifying the statement, or of observing the habits of this magnificent Gull during the breeding season.

LARUS MARINUS Linn.—Great Black-backed Gull. "Saddle-backed Gull." "Saddler."

Larus marinus, Aud., Birds Amer. vii. 172, pl. 450. Lawrence, Gen. Rep. 844.

The Great Black-backed Gull, which, with the single exception of the Glaucous Gull, is the most powerful of its tribe, is a very abundant bird during the summer months along the whole coast of Labrador. Indeed, this is almost the only locality on this side of the Atlantic where its habits during the breeding season can be successfully studied; the peculiar character of the coast renders it well adapted to the wants of the birds, and it is therefore their favorite breeding place. I was informed that it arrives there about the latter part of May, but with reference to its time of departure, I cannot reconcile my observations with those of Audubon. He states that "by the 12th of that month (August) they had all left Labrador;" whereas, I found them still numerous on the first of September, and I think I never saw so many of both old and young as I did at Henley Harbor on the 30th of August. At what time they really do depart, or whether any remain all winter, I am unable to say. I can account for this and many other discrepancies between our observations with respect to date, only by supposing the season in which Audubon visited the country was a very early one, or that last summer was remarkably delayed.

This species generally chooses for the situation of its nest one of the many small islands, some of them mere rocks jutting out of the water, which everywhere stud the Labrador coast; and contrary to the usual habit of Gulls, it does not congregate in large numbers upon a single island, not more than two or three nests being commonly placed together. It sometimes, however, mixes with the Herring Gulls, for among several hundred of the latter, which circled high over our heads when we invaded their territories, I never failed to detect a few of the Black-backed. I was surprised to find it breeding on some inland ponds, (there also in company with the Herring Gulls,) the nests being placed on small rocks jutting out of the water. In these situations I have thought them less shy than when breeding on islands open to the sea. The nest is large and bulky, composed of moss and lichens scraped into a heap, the cavity apparently formed by the weight of the bird. They are rather shallow for the width, which is nearly or quite two feet externally. The eggs are three, as is usual among the Gulls and Terns, and differ much in size, shape and color, even in those taken from the same nest, some being smaller than the average of Herring Gulls, though they are usually proportionately larger.

On the 4th of July three young birds of this species, apparently but a few days old, were procured and placed in a basket together with a number of Herring Gulls of about the same age. Even thus early they evinced their superiority in size and strength over the other species, for, on looking at them next morning, I found that, their quarters being rather crowded, they had trampled to death every one of the others, and were standing triumphantly over the mass of dead bodies, calling loudly for food. When fed they exhibited the greatest voracity and gluttony, each devouring at a meal three or four capelin some six inches long, which they could swallow whole, and they quarrelled and fought continually for choice morsels. Two of these birds were left in charge of a fisherman at Henley Harbor, and on our return, about seven weeks afterwards, they had grown to fully the size of the adults, and were magnificent birds and great favorites. They kept their plumage perfectly clean and in good order, and were very tame. They were then mottled all over with spots of dusky, most of the primaries, and a subterminal band on the tail, black; bill entirely black, legs and feet light flesh color. This is the plumage in which these Gulls remain the greater part of the first year. One of the birds was much larger and stronger than the other, which it tyrannized over continually and kept in perfect subjection. Both uttered frequently a whining noise, especially when hungry; which state, however, seems to be the normal condition of all Gulls, both young and old.

[Aug.

The Black-backed Gulls surpass all birds with which I am acquainted in their shyness and wariness, which are so excessive that it is only by stratagem that they can be procured. But two were shot by any of the party, both being killed with guns exceeding in their range those to which the birds were accustomed. They always fly at a great height over the water, and never alight except in open situations which they have previously cautiously examined. Their flight is firm, extremely powerful, performed with measured beats, and is capable of being greatly protracted. They can force their way against the strongest gales. Their food is principally fish of various kinds, though they do not refuse offal of any description. To procure fish they hover at a height of a few yards over the surface, and when one is espied drop heavily upon it, not, however, closing the wings, which are elevated and flapped rapidly to support them. They seldom or never dive, but on such occasions are frequently partially immersed.

During the breeding season the birds are very noisy and clamorous, continually uttering their loud, harsh, rough cries. These are of three distinct kinds; the first, their usual call, is a loud, rough, sonorous "kaw-awk," aptly designated by Audubon as a "furious laugh." They have also a short kind of bark, resembling the syllables "hac-hac-hac;" and in addition to these a loud harsh scream, uttered when their territories are invaded. On the 31st of July I saw a large number of these Gulls collected on the water some ten miles up Esquimaux Bay, where they filled the air with their loud continued cries, which could be distinctly heard at a distance of nearly a mile.

This Gull is universally known to the natives, as well as to sailors and fishermen, as the "Saddle-backed Gull," or, quite as frequently, simply "Saddler." I have never heard applied to it the name of "Coffee-carrier," said to be the title by which it is designated along the coast of New England.

LARUS ARGENTATUS Brünn.—Herring Gull. "Blue Gull."

Larus argentatus, Aud., Birds Amer. vii. 163, pl. 448. Lawrence, Gen. Rep. 844.

The Herring or Silvery Gull is by far the most abundant of the Gulls along the Labrador coast, where it breeds in great numbers, spending the summer months there, and not retiring at least until the second week in September. They were as abundant as ever on the first of that month, when I noticed great numbers of both old and young. I cannot, therefore, comprehend the statement of Audubon, where, in his account of *Larus marinus*, he says: "No individuals of *Larus argentatus* were, to my knowledge, seen on that coast (Labrador) during the three months that I passed there, and the fishermen told us that the 'Saddle-backs were the only large Gulls that breed there.'" On many of the innumerable small islands which form a belt six or eight miles deep along the coast in the neighborhood of Little Mecattina, and southward, immense companies of these Gulls had assembled to breed; and at Esquimaux Bay I found them breeding on the small ponds of the interior. They are every where known to the natives as "Blue Gulls."

On the 4th of July, at Sloop Harbor, I had an opportunity of visiting many islands where these Gulls were breeding in great numbers. On approaching one of the islands, where the birds were sitting quietly on their nests, or walking leisurely about, when we were still several hundred yards distant, they all left their nests, and with loud discordant screams, indicative of their anger at being disturbed, circled high over our heads far beyond the range of our guns. I found the nests placed on the ground in the most irregular manner, apparently without the slightest choice as to situation, except that they seemed to prefer the moss-covered rocks and dry bare spots, the grassy patches being appropriated by the few Eiders that bred on the same island. And here let me remark, that on those low grassy islands where the Eiders were most numerous, but few Gulls built their nests; and *vice versâ*, on those bare islands where the Gulls had collected in great numbers, we found but few nests of the

Eiders, though the two birds mix to some extent. The nests were large and bulky, composed of dried grass, moss and lichens scraped into a heap, the cavity formed apparently by the weight of the bird. The eggs, in every instance that came under my observation, were three, but varied surprisingly in size, color and markings, and also considerably in shape. They average rather more than two inches and three-quarters in length, by nearly two in greatest diameter, being thus rounded and obtuse. The ground color varies from a light bluish or greenish white to deep brownish olive; and the spots are of every size and shape, very irregularly disposed. I found eggs at that date in every stage of development, some being quite fresh, but in the majority the embryos were nearly fully formed. On the same day many young were procured, being caught as they skulked and hid beneath stones, or scrambled off over the luxuriant moss. In no instance did I observe any on the nests. At this period they presented a very curious appearance; they were ugly and misshapen, covered with thick whitish down, every where mottled with angular spots of dusky, and, on the whole, looked more like lumps of dirty carded wool than any thing else. When taken in hand they bit and scratched with all their strength, at the same time squealing loudly. Although these cries brought the parents a little nearer, none ventured within shot. On being placed on the water they swam with ease, and appeared to be perfectly at home. Soon after being caught they fed freely on fish and scraps of pork, and uttered constantly a whining noise. The first night, however, they were all trampled to death by some Black-backed Gulls placed in the same basket.

At Henley Harbor, during the latter part of August, many birds of the year were seen. They were at this time readily distinguishable from the adults, for besides being smaller, they were entirely of a deep dusky color, darkest below, and with the bills nearly black. One of these, slightly wing-tipped, showed considerable spirit, biting the finger placed incautiously within its reach, and ejecting the contents of its stomach—principally lance—with remarkably accurate and vindictive aim. The lance seems to be the favorite and principal food with this and other Gulls, and many were always to be seen fishing for them at the mouth of the harbor. To procure them they hover at a height of a few yards over the surface and drop suddenly down when a fish is discovered; never, I believe, diving, though they are often partially immersed. They rise again immediately, and the operation is repeated indefinitely, their hunger never seeming to be appeased. I have seen more than a hundred of these Gulls and the great Black-backed and the Ring-billed fishing together, but never noticed the slightest sign of any quarrelling or difficulty between them.

The Herring Gull requires three years to arrive at full maturity. During the greater part of the first year they are much as described above. The dusky gradually grows lighter, and by the second year the bird is white, mottled with dusky about the head and neck; the tail mostly black, the primaries black, as yet without spots, and the "gull-blue" replacing the grey mottling of the wings and back in irregular patches; the bill light flesh color, with a broad black band near the end. By the next winter the bird is perfect, except some slight mottling about the head and neck, and the following spring is in full plumage. I am enabled to give the above descriptions from specimens sent me from near Hampton, N. H., by Mr. Charles Perkins, shot about the first of December. They must moult very late, as some of these specimens had the quills only partially grown out. I am unable to say whether any breed in the immature plumage.

The abundance of this gull every where during its extensive migrations, cause its voice, flight and general manners to be so well known, that a detailed account of them is rendered unnecessary.

LARUS DELAWARENSIS Ord.—Ring-billed Gull.

Larus zonorhynchus, Aud., Birds Amer. vii. 152; pl. 446.
Larus Delawarensis, Lawrence, Gen. Rep. 846.

Three specimens of this small Gull were obtained at Henley Harbor on the

21st of August. They were all birds of the year, being every where mottled with dull greyish; the primaries and a broad terminal band on the tail black, as is also the terminal third of the bill, the rest being light flesh color. They were shot while busily engaged in fishing for lance, which seemed to form their favorite food. On skinning them, I found the gullet and stomach filled with the fish. They were not at all shy; they permitted a near approach without desisting from their occupation, and the three were shot in rapid succession before the rest became alarmed and flew off. Indeed, I have often thought that the wariness of Gulls is in exact proportion to their size. Thus the little Hooded Gulls, and the Kittiwakes, are so familiar as to hover and sport near the stern of a vessel; the Ring-bills come next, and though not so unsuspicious as the last, are by no means shy; the Herring Gulls, the next in size, are much more watchful and difficult to procure, while the Black-backed and Glaucous Gulls evince such excessive wariness and caution that it is only by stratagem they can be procured. Though the theory may not hold good in all cases, I certainly saw no exceptions to it during my stay in Labrador.

CHROICOCEPHALUS PHILADELPHIA (Ord.) Lawr.—Bonaparte's Gull.

Larus Bonapartei, Aud., Birds Amer. vii. 131; pl. 442.
Chroicocephalus Philadelphia, Lawrence, Gen. Rep. 852.

Many of these beautiful little Gulls were seen at different times during the voyage, though they were perhaps more abundant than elsewhere in the southern portions of the Gulf of St. Lawrence. It is not a little singular that the breeding places of a Gull so common, well known, and widely diffused as the present, should be still unascertained with certainty, and the egg almost unknown to science; yet such is the case. Though my opportunities of observing this species were limited, I could not but be struck with the remarkable familiarity and want of suspicion exhibited by it on all occasions. Numbers would often hover and sport around the stern of the vessel, so close that I could plainly see the dark spot behind the eye which characterizes the immature bird of this species. Their flight on such occasions, and indeed at all times, is extremely buoyant and graceful, in these respects resembling that of a Tern rather than of a Gull. I noticed that, while flying, individuals would scratch the head and neck with their claws, which operation, however, did not seem to impede their flight in the least. At that season (September) none were seen with the head enveloped in the hood which adorns both sexes during the breeding season. Those which I took to be birds of the year, had all a broad subterminal band of black on the tail, and in many the black of the primaries extended unbroken over the shoulder quite to the body.

RISSA TRYDACTILA (L.) Bon.—Kittiwake Gull.

Larus tridactylas, Aud., Birds Amer. vii. 146; pl. 444.
Rissa tridactyla, Lawrence, Gen. Rep. 854.

I met with this interesting Gull on but one occasion, which was on the 3d of August, while sailing up Esquimaux Bay several miles from its mouth. A small company hovered and circled over the boat, and a specimen was secured. Being only wing-tipped, it fluttered to some distance on the water, constantly uttering its piercing screams, which caused its comrades to hover over it for some time, showing their sympathy by loud cries.

STERNA WILSONI Bon.—Wilson's Tern. "Mackerel Gull."

Sterna Wilsoni, Aud., Birds Amer. vii. 97; pl. 433. Lawrence, Gen. Rep. 861.

During my short stay at Rigolet, I saw a good many of these Terns, but found none in any other locality. They possess in the extreme the buoyancy, gracefulness and ease of flight for which the whole family is so celebrated, performing the most beautiful evolutions without the least apparent effort. To obtain

their food, which, as far as I could ascertain, consisted chiefly of small fish, they hover lightly and slowly over the water at a height of a few feet. When a fish is espied, they nearly or quite close the wings and dart down with great rapidity, and usually go quite under water. With a slight shiver the beautiful birds shake the water off their plumage, swallow the fish as they reascend, and again hover eagerly watching for more. They were not at all shy. They are known to the natives by quite a variety of names. I have heard them called "Rapes," "Steerines," "Pathricks," and "Mackerel Gulls," the last being the name by which they and other Terns are known to the fishermen, given in reference to their forked tail.

COLYMBUS TORQUATUS Brünn.—Great Northern Diver. "Loon," "Loo."

Colymbus glacialis, Aud., Birds Amer. vii. 282; pl. 476.
Colymbus torquatus, Lawrence, Gen. Rep. 888.

This large, powerful and hardy bird is abundant throughout Labrador. It frequents chiefly the numerous ponds formed by the depressions of the rugged surface of the country, near the borders of which the nest is usually placed. Though numbers were seen, yet so shy, wary and vigilant is it, and so expert in eluding pursuit on the water by its extraordinary powers of diving, that not a single one was obtained by any of the party. The most successful method of procuring it is to lie perfectly concealed near the edge of the pond where it may be swimming, and to decoy it within shot by imitating its notes. The imitation, however, must be skilfully executed, or the wary bird will perceive the deception. The notes of the Loon, of all the birds with which I am acquainted, are the most wild, free and independent, seemingly uttered in full knowledge of the security which its wariness and vigor afford. It is from its cry that it derives its name of "Loon," or "Loo," as it is perhaps oftener pronounced by the natives. On the first of August, I came upon a pair of these birds on an inland pond, about three long gunshots wide; they had with them two young birds, apparently but a few days old. Perfectly aware of the safety of their position, they remained close together exactly in the centre of the pond, keeping the young between them, and at intervals sending forth their loud defiant screams. On being fired at, they simply ducked for a moment beneath the surface, and immediately rose again, and I was obliged to leave them to their occupations.

? COLYMBUS SEPTENTRIONALIS Linn.—Red-throated Diver.

Colymbus septentrionalis, Aud., Birds Amer. vii. 299; pl. 478. Lawrence, Gen. Rep. 890.

I obtained two eggs, supposed to be of this species, at Sloop Harbor, on the 4th of July; they were at that date quite fresh. The parent was seen but at a distance too great for positive identification. The nest was placed on the edge of a small pool of water, on a small barren island, and was very rudely constructed of dried rushes matted loosely together, on which the eggs were deposited without the slightest attempt at concealment. They measured two inches and nine-sixteenths in length, by one and eleven-sixteenths in breadth, and were of a uniform dark olive brown, with rather small spots of a very dark brownish black, and a few others of a lighter tint. They were much shorter and more rounded than undoubted eggs of *C. septentrionalis*, their form being regularly ovate, while that of the latter is nearly elliptical. The color was lighter. Very possibly they belonged to *C. Arcticus*.

ALCA IMPENNIS Linnæus.—Great Auk. "Penguin."

Alca impennis, Aud., Birds Amer. vii.; pl. 465. Cassin, Gen. Rep. 900.

Concerning this most extraordinary bird, remarkable in consequence of its not possessing the power of flight, and as being the sole representative in the

northern hemisphere of the numerous Penguins, (*Aptenodytes*) of the southern, I made diligent inquiry of every one who might be expected to have any knowledge of it. I was the more anxious to obtain some account of it from the fact of its being supposed to be nearly if not quite extinct; its introduction into the fauna of North America resting on very insufficient data. Though none of the natives of Labrador whom I interrogated had any knowledge of it, the fishermen knew immediately to what I referred when I spoke of "Penguins"—as they are called—and all with singular unanimity agreed in designating the Funks, an island off the south-east coast of Newfoundland as the only place where the birds were to be found. Yet I could never find a person who had actually *seen* one of the birds; they had only heard of them as Penguins. But the fact of their all agreeing as to the precise locality where the birds were to be found, seemed to me worthy of attention.

UTAMANIA Leach.

Gen. Ch.—Size moderate. General form stout, heavy, strong, compact; head moderate, neck short and thick, body heavy. Wings moderate; tail short; feet short and strong. Bill lengthened, about equal to the head, densely feathered for half its length, the feathers on the upper mandible extending much beyond the middle of the commissure, and nearly as far as those on the lower; very strong, much compressed, with several transverse grooves which are curved in the upper mandible. Upper mandible much deeper than the lower, with a moderately prominent basal ridge at base of the horny portion; the culmen regularly arched, tip considerably hooked and bent over the lower. Commissure very long, quite straight to near the tip where it is suddenly decurved. Gouys about straight. Nostrils linear, not pervious, moderately long, very narrow, situated just above the commissure on the feathered portion of the bill, immediately posterior to the lower corner of the basal ridge. Wings fully developed, admitting of flight, reaching beyond the base of the tail; primaries stiff, strong, somewhat fulcate, first longest. Tail short, pointed, rather stiffened, the feathers acuminate, central pair tapering and elongated. Legs short, stout and strong; tibia bare for a short space above the joint; tarsus shorter than the middle toe. Toes three, anterior, entirely united by a membrane. Claws all short, stout, blunt.

Colors.—Neck and upper parts brownish black; beneath white. A conspicuous white line from the eye to the summit of the basal ridge.

The essential characters of this genus lie in the wings, which are fully developed and admit of flight. By this alone it would be entitled to full generic rank, distinct from *Alca* with the type *A. impennis* L., were there no other characters involved. But one species, the *U. torda* Leach, is known, which is found abundantly in the more northern portions of both hemispheres, and is the most characteristic bird of those regions.

UTAMANIA TORDA Leach.—Razor-billed Auk. "Tinker."

Alca torda, Aud., Birds Amer. vii. 247; pl. 466.
Alca (*Utamania*) *torda*, Cassin, Gen. Rep. 901.

This, the most characteristic bird of marine arctic fauna, is remarkably abundant throughout the extent of Labrador. While in the Gulf of St. Lawrence, before reaching that country, numbers were every day seen flying rather low over the water, generally in single file, and sometimes passing very close around the vessel. At Esquimaux Bay, the most northern point visited, they were perhaps more numerous than elsewhere, breeding plentifully among the many thousands of Puffins there collected. I was credibly informed that they formerly bred in so great numbers on Backelew Island, off the coast of Newfoundland, that they received the name of "Backelew Birds;" an appellation I occasionally still heard applied to them, though they have entirely deserted the

island. Another small island on the east side of Esquimaux Bay, has in a like manner been deserted, the birds apparently having retired to the Puffin islands on the opposite side of the Bay. From these facts, I could not but conclude that the birds are slowly but surely retiring before the persecutions of man to more northern and inaccessible regions, though thousands still breed as far and farther south than Little Mecattina and the Murre Rocks.

It was at Sloop Harbor, on the third of July, that I first formed acquaintance with the Razor-billed Auks. As we dropped anchor in that sheltered cove, a large company of them were sitting at a little distance on a flat rock, crowded closely together, and all facing towards the sun, then low in the skies. They rested perfectly upright on their rumps, occasionally twisting their bodies in a curious jerking manner. No sooner, however, had our boat touched the rocky shore than they all instantly took flight and dispersed either singly or in small flocks. Although so watchful, they seemed to be not at all aware of the nature of the danger that threatened them, for they flew directly towards or past us as often as in any other direction, and numbers were easily shot. On the following day, the fourth of July, while searching for the eggs of the Eiders and Herring Gulls, I had abundant opportunity for observing their flight and general manners, for they bred in considerable numbers in the crevices of all the rocky islands in the vicinity.

Although the Razor-bills cannot be approached while sitting on the rocks, yet while flying they evince such a want of caution, or rather so much stupidity, as to fly continually directly over and past a boat at such short distances that they are easily shot down. But they are strong and tough birds and carry a great deal of shot, requiring a heavy charge to kill them. I have occasionally seen one fly off, apparently as strong as ever, leaving a cloud of white feathers floating in the air. When only one wing is broken they dive with great ease and celerity, and are then difficult to secure. When shot at and not touched, they open and shut the tail, swerve from their course and quicken their flight.

Though they are, I believe, entirely mute while flying, on being wounded and taken in hand they utter a loud, rough, hoarse cry, at the samet ime throwing themselves on their backs, fighting and scratching most furiously, They bite with great force, their strong hooked bills enabling them to inflict a severe wound, and they will suffer themselves to be held up by their bite before they will relax their hold. The name of *Razor-bill* is certainly a most appropriate one.

The flight of this bird is firm, well-sustained, very swift, and, considering the heavy body and short wings, very powerful. It is performed with short, quick, vigorous flappings. They never sail; but on one occasion I saw an individual endeavor to flap its wings with a slow, measured stroke. It was but a few yards, however, and it at once found that mode of flight impracticable. On the water they swim lightly and elegantly with the head and tail elevated, exactly as represented in the right hand figure of Audubon's life-like plate. When well stewed, their flesh is by no means poor, being, though rather tough, well flavored, and not possessing the slightest rank or fishy taste. We all ate them whenever they could be procured.

The situations chosen by the Auks for their breeding places are generally the rocky, precipitous islands where there are many caverns and fissures, in which the eggs are deposited, often together with those of the Black Guillemot, *Uria grylle*. I have never found more than a single egg, though in the face of such authority as Audubon to the contrary, I should not like to assert that two are never laid. I have great pleasure in being able to corroborate the statement made by this distinguished ornithologist with regard to the sagacity displayed by the birds in protecting their eggs from the wet. When deposited in damp fissures, through which the water is continually percolating, a layer of small pebbles is placed beneath the egg, to keep it from the moisture, but in sufficiently dry situations, where the caution is no longer necessary, the birds never undertake the additional labor.

[Aug.

The eggs, though differing considerably in their markings, are comparatively uniform in size and shape, being usually about three inches in length by a very little less than two in breadth. The ground color is either pure white or with a creamy or light bluish tinge. The spots are of different shades of umber brown, very often attracted into a ring around the larger end, but sometimes pretty uniformly distributed. They vary in size from mere points to large blotches. The eggs, though thus differing among themselves, still always preserve a certain character distinct from that of the Murre, through all the endless variations of the latter. They are smaller, their shape is less elongated, they are never of a green ground color, and are never fantastically streaked and lined—the more usual pattern among those of the Murre.

I was not a little surprised, when I visited the Puffin Islands, to find there the Auks also, breeding in considerable numbers. I estimated that a fourth or fifth part of the many thousand birds breeding there were of this species. On the north side the island is rocky and precipitous, and there the birds principally collected; yet on all other sides they were mixing indiscriminately with the Puffins, and laying their single egg in the deserted holes of the latter. In these holes, where the earth was comparatively dry and warm, not a vestige of a nest of any kind was found, the egg being deposited on the bare ground. Associated so intimately, I never saw the slightest semblance of any difficulty between the two species, although in some instances they were incubating in contiguous holes. At that date (July 25th) some of the eggs were quite fresh, and I found young birds, from which is to be inferred that the species is not very exact as to the time of laying its eggs.

I noticed another fact that I do not recollect of having seen recorded; it is, that the Auks associate in considerable numbers with the Murres. While passing the well-known rocks where the latter were breeding in tens of thousands, among the countless flocks flying constantly around us, we never failed to detect some of the Auks, either in flocks by themselves or mixing indiscriminately with the Murres. Although the two birds are identical in size and colors, they could always be distinguished, even at the distance of a long gun shot, by their bills; the long, slender and pointed ones of the Murres contrasting distinctly with the short, thick, seemingly truncate bills of the Auks. As a natural consequence of this intermingling, the eggs must of necessity be confounded; yet I do not think it would be difficult to distinguish with tolerable certainty the two kinds, by the differences already pointed out.

It would seem the Razor-billed Auk is capable of conforming its habits in a remarkable degree to suit varying circumstances, while carrying out the great law of reproduction. Its eggs are deposited in fissures and caverns with the Black Guillemot, on the bare rock with the Murre, and in holes in the ground with the Puffin. The time of depositing its eggs, and their number, (?) also vary. The fact of its associating in perfect harmony with other species to the extent which it does, indicates the possession of a remarkably peaceful disposition. It is known universally to all fishermen and eggers, as well as to the natives, by the singular name of "*Tinker.*" Its proper name I never heard applied to it.

MORMON ARCTICUS ?* Illiger.—Arctic Puffin. "Parrakeet."

Mormon arcticus, Aud., Birds Amer. vii. 238, pl. 464. Cassin, Gen. Rep. 903.

The habit of collecting in immense numbers at particular localities during

* A series of Puffins recently received from Europe by the Smithsonian Institution, has raised a doubt with regard to the specific identity of the American bird with the true *M. arcticus* of Europe. I have therefore thought it proper to give the name *arcticus* with a query. It is also believed that there is on the Labrador coast an undescribed species of *Mormon*, in addition to the present. Prof. Baird is at present investigating the subject, the results of which will soon be published in a monograph.

the breeding season, so characteristic of the whole family of *Alcidæ*, is a trait exhibited in the highest degree by the species now under consideration. With scarcely the exception of the Common Murre, no bird of the family shows so pre-eminently gregarious a disposition as does the Arctic Puffin. Collecting, as it does in thousands, on particular islands of small extent, it becomes a matter of astonishment that food can be procured in sufficient quantity to sustain them, or that each pair can find a place to deposit its egg. The pertinacity, too, with which they cling to the immediate vicinity of their breeding place is remarkable. But a very short distance from an island where there are thousands, it is a comparatively uncommon thing to see a Puffin. The most extensive of these breeding places appears to be an island near the harbor of Bras-D'or, visited by Audubon in 1833, of which he has written so graphic and instructive an account. The one, however, that I had an opportunity of visiting cannot be much behind it in point of the numbers of the birds breeding on it; and during a stay of three days I had ample opportunity of examining the island and noting the manners of its curious population. My visit was on the 25th, 26th and 27th of July. Let a short extract from my journal describe our approach to the island.

"We were now within less than a mile from the island, towards which all eyes were anxiously turned, and still not a bird met our gaze. But a few minutes more, however, and they commenced to appear, flying round the boat or resting on the water; all were 'Parrakeets' and 'Tinkers,' except now and then a solitary 'Turre.' They were tamer than I ever saw birds before, almost flying between the masts of our little whale-boat; it was hard to restrain from firing. As we rounded the island close to the shore, they came tumbling out of their holes by hundreds, and with the thousands we disturbed from the surface of the water, soon made a perfect cloud above and around us, no longer flying in flocks, but forming one dense continuous mass. And yet not a gun had been fired."

The Parrakeet Islands are three in number, lying along the western shore of Esquimaux Bay, just at its mouth. The one I visited is the innermost as well as the largest, though the others are equally crammed with the birds. It is about a mile in circumference; in shape almost a perfect semicircle, with two points stretching out and enclosing a snug cove, where only can a landing be effected with safety. It is abrupt and precipitous on the three sides, the fourth sloping gradually down to the cove. The top is nearly flat, and covered with a rather luxuriant growth of grass, the soil being enriched by the innumerable droppings of the birds. The three sides in which the holes are dug are so steep and precipitous that it required considerable agility to scramble along them, the danger of falling into the water below being increased by the slipperiness of the soil, worn smooth by innumerable feet, and continually moistened with ordure. The sides are composed of soft loamy earth, with rocks of every size and shape jutting out in all directions, and afford the most favorable possible conditions for the excavation of the burrows. The fourth side between the two points is composed mostly of masses of rock, in the crevices of which the Auks chiefly deposit their eggs, though they very often appropriate the deserted holes of the Puffins.

The holes in the ground in which the Puffins deposit their eggs,—a habit, as far as I am aware, entirely peculiar to the genus in this family of birds—are excavated by the birds themselves, an operation for which their powerful beaks and long strong and sharp claws admirably adapt them. They extend nearly or quite in a horizontal direction, and are subcircular in shape, with the diameter scarcely larger than is necessary for the free passage of a single bird. They vary much in length, but the majority are not so deep but that the egg may be reached by thrusting in the arm to its fullest extent. Their course is seldom in a straight direction; they curve and wind in a most tortuous manner, many burrows being connected together by winding passages. The en-

trances to the holes are worn flat and smooth by continual paddling from the feet of the birds, and, as well as the whole sides of the island, are moist and slippery with the ordure. The sides of the island from just above high water mark to the very top, are perforated with innumerable holes, but on the top itself not a single burrow is to be seen. At the further extremity of the hole, which is usually a little enlarged, the single egg is deposited, always a slight bed of dried grasses being first arranged to keep it from the moist earth. I have indeed found eggs lying on the bare ground near the entrance of the burrows, whither they had apparently been dragged by the bird as it hurriedly made its exit; but in no instance did I find one in its usual position at the further extremity, that was not upon a layer of grass. I noticed this fact the more particularly, since Audubon expressly states that no nest whatever is formed for the reception of the egg. Without for a moment doubting the accuracy of that great naturalist's observations, the present case is only additional proof of the extent to which the habits of birds are influenced by circumstances; the position of nests, the number of eggs, &c., varying much, and the food changing in a measure with every change of locality. The eggs measure two and a half inches in length, by one and three-fourths in greatest diameter, varying very little from this standard; in shape, which is a rather rounded ovate, they differ in being more or less obtuse at the smaller end. The greatest diameter is nearly opposite the middle. The shell is usually more or less granulated, but differs much in the extent of the granulation. The color is white or whitish, varying from nearly pure to a brownish hue, the latter color being in the shell, and not caused by soiling or discoloration. They are marked with obsolete, sometimes almost imperceptible dots, spots, and lines of light purplish, mostly attracted into a ring around the large end. There are sometimes a few irregular splashes of very light yellowish brown. Audubon is clearly in error when he states that they are simply "pure white." At that date, (July 25th) they all with few exceptions contained young about to be hatched.

Another extract from my journal will portray, perhaps more graphically than could be done in any other style, the manners of the birds on being invaded. "Hardly had our boat touched the shore than we leaped out, guns in hand, and at once scattered over the island. As we advanced along the sides, the affrighted birds darted past us like arrows, issuing from their burrows beneath our feet and around us, and all making directly for the water. Those already disturbed flew in every direction above us, while thousands rested on the water in a dense mass at a little distance. I took my stand on a flat rock, and in less than an hour a pile of Puffins, more than I could carry, lay at my feet. Shortly after I commenced firing the birds formed themselves into an immense circle, of a diameter of perhaps a third of a mile, one point of which just grazed the island. It was astonishing to see with what precision this circle was preserved, each bird flying directly in the wake of the one that preceded. I had merely to stand facing the advancing birds, and no better opportunity for continual slaughter could be desired. I now realized what I had been told, but had found hard to believe, that a wagon might be filled with the birds by a tolerably expert marksman, shooting them at just such a moment that they should fall into it. The poor things seemed not at all aware of the nature of the danger that threatened them; flying so close past me that I could almost strike them with my gun. During the continual firing the birds would emerge from their holes every minute or two; and after shooting for half an hour on one spot I was not a little surprised to see two or three start out almost from between my feet, and in great fright make the best of their way down to the water. On emerging from the holes the birds generally looked around for a moment to see what was the matter, and then in great haste fluttered and tumbled down to the water below, in which they immediately dived, and swimming swiftly under water reappeared at some distance. From the countless thousands flying

around me I did not hear the slightest note of any kind; they flew in perfect silence. When wounded, if they fell on the land, they immediately ran and threw themselves into the nearest hole, if in the water, they dived and swam as far under the surface as their strength allowed. I observed not the slightest indication of any sympathy for those wounded or killed on the part of the other birds, as stated by Audubon. The survivors did not notice them in the least, though they lay exposed everywhere on the rocks, and floated about on the water."

The flight of the Puffin when once on wing is firm, well sustained, very swift and performed with short, quick, vigorous beats. When it takes flight from a rock whence it can project itself into the air, it at once supports itself without difficulty; but when on the water it is obliged to flap over the surface for several yards before it can rise on wing. When getting under weigh, the feet are extended backwards and outwards on each side of the tail, which is spread, but they are soon drawn up, and the tail closed. When shot at and not touched, like the Auks they swerve from their course, open and shut the tail, and extend the feet. When standing on a rock or at the entrance of their burrows, where they alight without the slightest difficulty, they present a peculiarly grotesque appearance, such as is afforded by no other bird. Their short thickset bodies, big heads, enormous brightly colored bills and red legs, give them a comical appearance, which is enhanced by their upright position and the odd nature of their movements, as they twist the head and jerk the body in various directions. Though on a three days acquaintance we were somewhat familiarized with their movements, we could never quite restrain a laugh when we saw one thus "attitudinizing" on the edge of a rock.

When taken in hand the Puffin utters a loud, hoarse, croaking scream, at the same time fighting most furiously. They are capable of inflicting a very severe wound with their powerful bills, easily drawing the blood. Their long and strong inner claw is also an effective weapon, so that by dint of scratching, biting, and struggling, they proved difficult customers to manage. The most courageous of our party seldom held one more than a few moments before he was glad to set it at liberty. Indeed, their rage at being caught is so ungovernable, that two held together attacked each other with fury, and a single one held up by the wings, bit its own wing and scratched its own face most energetically.

I could not but admire the beautiful provision of nature with regard to furnishing this bird with the means of excavating its burrow with facility. The inner claw of each foot is very long, much curved and excessively sharp. To preserve it so, when not in use, it always lies perfectly flat, so that the point does not rest on the ground. In digging and fighting, however, it is held upright, and then becomes a very effective weapon. The bill, always so remarkble in form and color, varies much with age in size and shape, and also in the extent of the ridges and furrows. The color, however, is always pretty constant; and a description of its tints, with those of the eyes, feet, &c., taken from a very perfect fresh bird, may not be uninteresting, as the color fades much in dried specimens. Base of the bill and first ridge dull yellowish white, between the two dark bluish ash; rest of bill bright vermillion red, the tip of the lower mandible and the two last furrows being yellowish white. Inside of mouth and warty rugose excrescences at the base of the commissure bright chrome. Iris hazel, eyelids vermillion, the short processes above and below the eye bluish ash. Legs and feet bright orange red, claws black.

I was much surprised while at Rigolet, to see a great number of Puffins flying over the surface of the Bay in large compact flocks. Whether they had come from the island described, or whether there was another island in the immediate vicinity, I am unable to say, though I think the latter most probably the case. These birds proved rather shy, avoiding our boats with some care. The fact of their being found so far inland is worth recording.

[Aug.

The flesh of the Puffin, though not ill-flavored, is so excessively tough as to be eatable only in cases of necessity. It is most commonly known as the "Parrakeet," (Paroquet) as it is pronounced; they are also called "Sea-parrots," and are sometimes designated by their proper name of Puffin.

URIA (URIA) GRYLLE Latham.—Black Guillemot.—"Sea-pigeon."

Uria grylle, Aud., Birds Amer. vii. 272, pl. 474.
Uria (*Uria*) *grylle*, Cassin, Gen. Rep. 911.

The history of the Black Guillemot is an interesting one. In the extraordinary changes of plumage it undergoes, in its extensive breeding range, and the many entirely peculiar habits it possesses, it differs widely from all birds of the family on the eastern coast of America. The most remarkable fact connected with it is, that it breeds abundantly in the interior of the continent, being found in great numbers on the southern shores of Hudson's Bay, while the other species of *Alcidæ* are probably without an exception exclusively marine. It is very plentiful throughout the extent of Labrador, where many remain during the whole winter; in fact, with the exception of the Auks, Murres, and Puffins, which congregate in such immense numbers at certain places, it is the most common and generally distributed bird, breeding along the whole coast. I obtained eggs at Sloop Harbor, the first locality visited, and at Groswater Bay they were still more abundant. Audubon speaks of finding them at the Magdaline Islands, and I have seen specimens from Greenland, which, with the fact of its breeding plentifully on Hudson's Bay, prove for it a breeding range remarkable among the *Alcidæ*. It is a hardy bird, remaining throughout the year in Labrador. The changes of plumage which it undergoes are very great. About the middle of August, or as soon as the duties of rearing the young are concluded, the change commences, with the moult. In a very short time they have become most curiously mottled with pure white, and the change goes on till the body becomes almost entirely white—the wings and tail mostly remaining black. In this state of plumage, which is shared also by the young for the first year, they continue during the winter, and until the breeding dress is again assumed the following spring. While undergoing the change, they are entirely unable to fly, from the loss of the primary quills.

The Black Guillemot chooses for its breeding place the most rocky, broken, and precipitous islands along the coast, in the numerous fissures and caverns of the eggs are deposited. Wherever there are rough jagged rocks sloping down in huge masses to the water, there the Black Guillemot will always be found breeding in greater or less abundance. Though they never congregate at one spot in such immense numbers as the Puffins and Murres are wont to do, yet there are some islands which, from their peculiar adaptation to their wants, are taken complete possession of by the birds. These islands, wherever found, are known to the natives as "Sea-pigeon Islands." Here they breed in great numbers, every fissure and cavern being occupied by one or more pair. They show marked preference for the most tortuous and deepest crevices, at the extremity of which the eggs are deposited. They are most usually two in number; never more, so far as my own observations extend; but as Audubon, on the best of authority, personal observation, expressly states that the number is sometimes three, the fact must be considered as established. They measure nearly or quite two inches and three-eighths in length by one and five-eighths in greatest diameter, and are, in size and shape—which latter is nearly elliptical—pretty constant, much more so than is usual in the family. The shell is rough; its ground color a very light greenish or earthy white; it is irregularly spotted and blotched with two shades of brown, one very dark, and with light purplish. The markings are mostly attracted into a ring about the larger end, though they vary much in their disposition, sometimes being very regularly distributed over the whole surface. The egg is never, I

believe, streaked in any manner. Towards the latter part of June or 1st of July the eggs are laid, and the young appear the second or third week of that month; but the precise period of incubation I am unable to state. When surprised on the nest, the parent, if she be not already there, creeps to the furthermost extremity of the fissure, and, as if aware of the safety of her retreat, cannot be induced to come out. But if it becomes aware of an approach before the entrance be obstructed, it invariably takes flight, making directly for the water. Should the fissure be so shallow that the bird may be reached by the hand, it sits quite still, even allowing a noose to be put over its head without struggling, and on being taken in hand shows a gentleness of disposition quite the opposite of the Puffins. It merely pecks at the hand once or twice feebly, and yields itself in silence and without struggling. The young at first are entirely of a dull sooty black, and have not the beautiful vermillion legs of the adult, these being of a dusky hue. They constantly utter a low, plaintive "peep," when requiring attention from the parent. On a warm, sunny day, all the birds will sometimes leave their eggs and young, and collect in large flocks on the water at a little distance from the shore, where they wash and plume themselves. So completely are the nests deserted on these occasions, that on an island nearly a mile in circumference, I have found but a single bird on its nest, though hundreds rested on the water at a little distance.

The flight of the Black Guillemot is firm, even, and direct, though not powerful; performed by quick flappings, when the white of the upper and under surfaces of the wings shows as one continuous spot. They invariably, except when going to and from their eggs, fly very low over the water; I never saw one more than a few feet over the surface, and they usually just clear the tops of the waves. They are rather timid and wary, seldom allowing an open approach within shooting distance, and always when flying, wheeling and changing their direction just at the right moment. The best way to procure them is to sail or row directly down wind upon them, since, being unable to rise from the water except against the wind, they are forced to fly in such a direction as to afford a good shot. They often dive on being approached, when by noting their direction and pursuing in haste, they may be shot the instant they rise, or as they fly off. They are most expert divers, easily eluding, when on the watch, the shot intended for their destruction. When shot at in flight and not touched, they generally plunge at once into the water, as if killed, which idea however is quickly dispelled by seeing them reappear at a little distance and take flight. Except near large breeding places they are seldom seen in companies of more than a dozen, and far oftener they are to be found singly, or two or three together. They are universally known to the natives and fishermen as "Sea-pigeons," the only name I ever heard applied to them.

Uria (Cataractes) lomvia, Brünn.—Foolish Guillemot. Murre. "Turre."

Uria (*Cataractes*) *lomvia*, Cassin, Gen. Rep. 913.

On the sixth of July we passed a celebrated breeding place of these birds, known as the "Murre Rocks," situated a few miles north of the harbor of Little Mecattina. They are two small, rocky and very precipitous islands, almost entirely destitute of vegetation; the sides, which rise abruptly from the sea, are composed of successive tiers or ledges of shelving rock, on which the eggs are deposited. The birds at this date were breeding on the islands by tens of thousands; their number was truly incredible, and yet I was informed that these were rather fewer than usual. As we drew near the island, the air seemed darkened with the masses that wheeled and circled overhead; while on every flat rock and ledge the birds were densely packed in rows and tiers, each sitting, or rather standing (for they seemed to rest perfectly upright on their rumps) sentinel over its solitary egg. The birds all seemed to be facing in the same direction, and it was with great pleasure that I noticed the curious

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effect mentioned by Audubon in his interesting account. The white breasts of the birds appeared in marked contrast to the dull grey of the rocks, with which the color of the head and neck so well harmonized as to cause the birds to appear deprived of those very indispensable portions. To my great disappointment, I was not permitted to land and examine the islands and their inhabitants; our captain, as on other occasions, paying no regard to the wishes of the passengers. Again, on our return, though we passed between the islands, not for an hour, even, would he delay, to enable me to notice the birds or to obtain specimens. I am therefore unable to give any account of the manners of these most interesting birds. A barrel of eggs was procured, and placed at my disposal.

The egg of the Foolish Guillemot is notorious among that of all other birds, for the variations it presents in size, shape, color and markings, but more especially the latter. From a large number of specimens, I found the average size to be a very little over three inches and one-fourth in length, by two in greatest diameter, while the greatest difference in length was five-eighths of an inch. The diameter was much more constant, differing but one-fourth, thus causing the variations in shape to be exceedingly great. The ground color of the egg varies from a bright cream color to pure white, and then passing through earthy, greyish, bluish and greenish-white to light green, is found of every shade of the green to the very darkest. The more usual color is some shade of green. The markings of the cream colored and white specimens are usually spots and blotches of different shades of brown, pretty uniformly disposed over the whole surface. Eggs of this type bear the closest resemblance to those of *Utamania torda*, but may usually be easily distinguished by their larger size and more pyriform shape. The prevailing pattern of coloration among the light earthy and bluish-white eggs is a ring of spots around the larger end; these very closely resemble those of *Uria grylle*, as far as color is concerned. The green eggs present an infinite variety of patterns, which it would be useless to attempt to define; they are oftener streaked than blotched, the lines being angular and sharply defined, crossed and recrossed in the most fantastic manner. Occasionally a pure white egg is met with, and I have seen some that had much the peculiar pattern and appearance of those of *Meleagris gallipavo*.

The "egging," or traffic in the eggs of the Murre as at present carried on, is on systematic principles, and furnishes constant employment during the summer to men who make it their profession. The method pursued to procure the eggs fresh is singularly unique, but entirely successful. They land on one of the islands and break every egg that they can find upon it; the next day, repairing to the spot, all those eggs found cannot but be fresh. By collecting these, of course the birds are prevented from sitting, and thus any quantity of eggs may be procured. Notwithstanding the wholesale system of destruction thus carried on against the birds, they are still to be found in prodigious multitudes; yet it is remarked by all those who have visited the coast for a number of years, that their numbers are slowly but surely decreasing under this incessant persecution, which not even their myriads enable them to withstand. I was informed that there is a law which forbids the collecting of the eggs, but if so, it has very little practical effect.

The present species, as well as the *U. ringvia* and *U. arra*, is known to the natives and fishermen as either the "Murre" or "Turre," the latter being perhaps the more usual appellation. This name is also applied to the *Mergulus alle*, which is known as the "Little Turre," or sometimes as the "Little Noddie." On the coast of Maine it is also called "Ice-bird."

A letter was read from Dr. Jas. C. Fisher, resigning his office as Librarian of the Academy.

On motion the resignation was accepted.